JVC

SERVICE MANUAL

D-ILA PROJECTION

DLA-M2000SCU
DLA-M2000SCE

BASIC CHASSIS
XG

Supplementary

The following item for the DLA-M2000SCU/ DLA-M2000SCE models were changed partly from DLA-M2000LU/ DLA-M2000LE models. Therefore, this service manual describes only the items which differ from those of the DLA-M2000LU/ DLA-M2000LE model service manual.
For details other than those described in this manual, please refer to the DLA-M2000LU/ DLA-M2000LE models service manual (No.51781 Mar. 2001)

■ OUTLINE

The enhanced superior functionality of this model includes interchangeable lens capability and higher contrast ratio.

■ DIFFERENCE LIST

● USING PW BOARD (Page32)

Model / PWB A'SSY	DLA-M2000LU / DLA-M2000LE	DLA-M2000SCU / DLA-M2000SCE	Remark
ANALOG MODULE PWB	SXG-1101A	←	
DPC MODULE PWB	SXG-1201A	SXG-1203A	Assembly supply parts
DD MODULE PWB	SXG-1301A	SXG-1303A	Assembly supply parts
B DRIVE MODULE PWB	SXG-3301A	SXG-3303A	Assembly supply parts
RG DRIVE MODULE PWB	SXG-3401A	SXG-3403A	Assembly supply parts
POWER PWB	SXG-9003A	←	
LAMP POWER PWB	SXA-9107A(LU)	← (SCU)	
	SXA-9108A(LE)	← (SCE)	
IGNITER PWB	SXA-9303A	←	
MAIN LINE FILTER PWB	SXG-9505A(LU)	← (SCU)	
	SXG-9506A(LE)	← (SCE)	
CONTROL & 3.3V MODULE PWB	SXG-0P001A	←	

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No.51781B
Oct. 2001

● EXPLODED VIEW PARTS LIST (Page 34)

⚠	Ref. No.	Parts No.		Remark
		DLA-M2000LU / DLA-M2000LE	DLA-M2000SCU / DLA-M2000SCE	
	23	LC30219-023B	LC30219-025A	NAME PLATE
⚠	34	LC30979-010A(LU) / LC30979-011A(LE)	LC30979-015A(SCU) / LC30979-016A(SCE)	RATING LABEL

● PRINTING PARTS LIST (Page 45)

⚠	Ref. No.	Parts No.		Remark
		DLA-M2000LU / DLA-M2000LE	DLA-M2000SCU / DLA-M2000SCE	
	1	LC-20466-012A (LU) / LC-20466-013A (LE)	LC-20466-018A (SCU) / LC-20466-019A(SCE)	PAKING CASE

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DLA-M2000SCE #999
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DLA-M2000LU
DLA-M2000LE

V28678

JVC

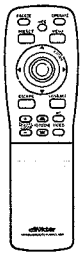
SERVICE MANUAL

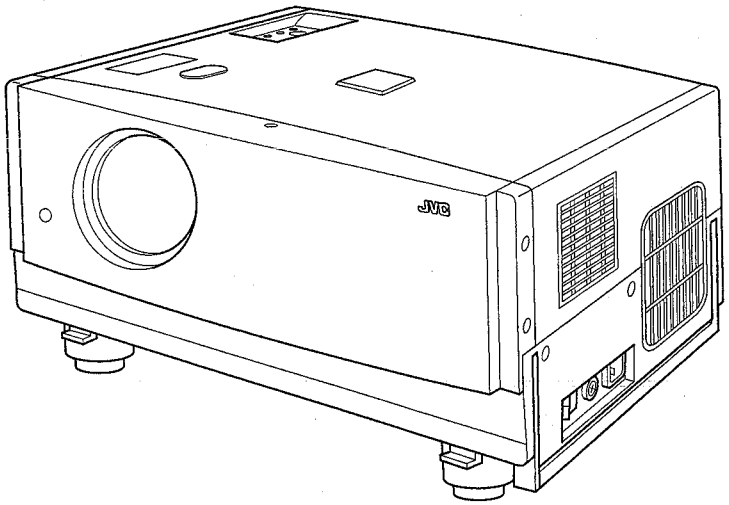
D-ILA PROJECTION

DLA-M2000LU
DLA-M2000LE

BASIC CHASSIS
XG

D-ILA™





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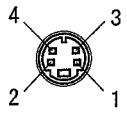
No.51781
Mar. 2001

SPECIFICATIONS

Item		Contents	
		DLA-M2000LU	DLA-M2000LE
Projection method		D-ILA (Direct Drive Image Light Amplifier) method (Reflective-type active-matrix method)	
Device		D-ILA Device 0.9 inch 2.3cm measured diagonally (1365pixel × 1024pixel × 3plane : Total pixel 4,193,280pixel)	
Lamp		550W Xenon lamp [type : BHL5003 / 550W]	
Colour Systems		NTSC, NTSC4.43, PAL, SECAM (Automatically switch / Manual switch)	
Dimension		20"(Width) × 10-1/2"(Height) × 15-1/2"(Depth) (Except protuberance)	505mm(Width) × 265mm(Height) × 393mm(Depth) (Except protuberance)
Mass		Approx. 34.32lbs	Approx. 15.6Kg
Power requirement		120V, AC, 60Hz	220 to 240V, AC, 50Hz / 60Hz
Power consumption		9A	5A
Resolution		1365dots × 1024dots(4:3) 1280dots × 1024dots(S-XGA Full screen) 1600dots × 1200dots(U-XGA Resizing display)	
Refresh rate		Horizontal Frequency : 15kHz～105kHz Vertical Frequency : 50Hz～100Hz	
Audio output		1W(monaural), 1-5/8" (4cm) round type micro-speaker × 1	
Input terminal			
	AV IN	Y/C 1 line, mini DIN 4pin × 1 VIDEO 1 line, RCA pin × 1 AUDIO 1 line, RCA pin × 1(use both as Y/C and VIDEO)	
	PC1	1 line, D-sub 3-row 15pin × 1	
	PC2	1 line, BNC × 5 Y, B-Y, R-Y Component signal Y, Pb, Pr DTV format signal R, G, B Analog RGB signal H/Cs, V Horizontal sync (H) / Composite sync (Cs) signal、Vertical sync (V) signal	
	PC AUDIO	1 line, Mini jack × 1 (use both PC1 and PC2)	
	CONTROL	RS-232C 1 line, D-sub 9pin × 1 (External control) REMOTE 1 line, Stereo mini jack × 1 (Remote control unit)	
Output terminal			
	PC OUT	1 line, D-sub 3-row 15pin × 1	
Environments		Temperature +5℃～+35℃ (41° F～95° F), Preservation temperature : -10℃～+60℃ (14° F～140° F) Humidity 20%～80%(non condensing)	
Projection lens (Option)		GL-M2910G····· Rear projection, electric focus, short focus lens (projection ratio 1:1) GL-M2915SG ···· Electric focus, short focus lens (projection ratio 1.5:1 Manual vertical shift adjustment) GL-M2920ZG ···· Electric zoom, electric focus and short focus lens (projection ratio 2:1～3:1) GL-M2930SZG ··· Electric zoom, electric focus and long focus lens (projection ratio 2.9:1～5.5:1, Manual vertical shift adjustment)	
Remote control unit		RM-M2000 (R03 / AAA dry cell battery)	

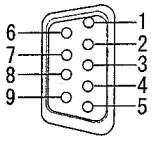
Design & specifications are subject to change without notice.

■Y/C input terminal



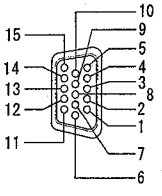
Pin	Signal
1	GND(Y)
2	GND(C)
3	Y
4	C

■RS-232C(CONTROL)



Pin	Signal	Pin	Signal
1	N/C	6	N/C
2	RD	7	N/C
3	TD	8	N/C
4	N/C	9	N/C
5	GND		

■D-sub 15pin
(PC1/PC OUT)



Pin	Signal	Pin	Signal
1	Red	9	N/C
2	Green	10	GND(SYNC)
3	Blue	11	GND
4	N/C	12	N/C
5	N/C	13	H. SYNC
6	GND(R)	14	V. SYNC
7	GND(G)	15	N/C
8	GND(B)		

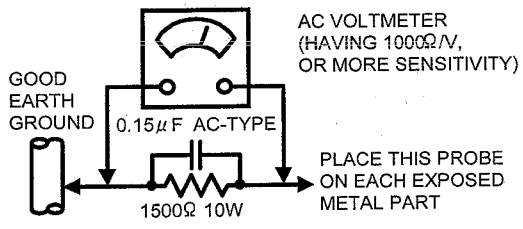
SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
4. **Use isolation transformer when hot chassis.**
   The chassis and any sub-chassis contained in some products are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some products when the HOT chassis is exposed.
5. **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED(NEUTRAL) : (⏚) side GND and EARTH : (⏚) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.
6. If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
7. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
8. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
9. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.
10. **Isolation Check**
    (Safety for Electrical Shock Hazard)
    After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

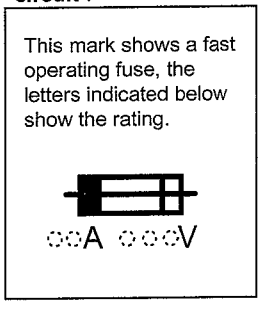
    (1) **Dielectric Strength Test**
    The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1100V AC (r.m.s.) for a period of one second.
    (. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
    This method of test requires a test equipment not generally found in the service trade.

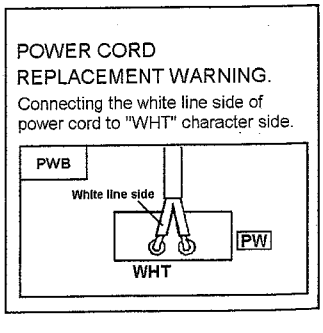
    (2) **Leakage Current Check**
    Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).
    However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

    ● Alternate Check Method
    Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).
    However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



11. **High voltage hold down circuit check.**
    After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly.
    See item **"How to check the high voltage hold down circuit"**.





■ Warning and caution labels

Labels advising of warning and caution are affixed on and in various locations of the product. Take careful notice of these during service and inspection.

⚠ WARNING Risk of lethal or otherwise serious personal injury.
⚠ CAUTION Risk of personal injury and damage to the product.

Class	Pictorial	Label advisory	Location
⚠WARNING	Hot, breakable	This projector lamp emits high heat and contains high-pressure during use. If touched, the lamp (bulb) may rupture and burns may result. Before attempting to replace the lamp, remove the power cord plug from the outlet and wait for the lamp (bulb) to cool (at least one hour). Then proceed to replace the lamp.	Bottom chassis
⚠WARNING	High voltage	Never open any cover on the projector except the lamp and filter covers. Dangerous electrical voltage inside the projector.	Bottom chassis
⚠CAUTION	Hot, shock hazard	Do not insert foreign objects into the ventilation holes as this can result in fire or electrical hazards. Do not block the ventilation holes as this may cause the internal temperature to rise and possibly result fire. When the inside of the unit requires cleaning, consult your nearest JVC dealer or service center.	Side of top cover
⚠CAUTION	High brightness	Never look into the lens while the projector is on. There is danger of eye damage.	Top cover
⚠CAUTION	High voltage	*Turn off before opening this lamp cover. See user' s manual for replacing the* lamp. Replace with the same type (**BHL5003-S**) lamp rated **550W**.	Bottom chassis
⚠CAUTION	Hot	Caution, high temperature	Lamp assembly

■ Additional cautionary items

- **High voltage is applied for lighting the lamp.** During adjustments and other work with the cover removed, extreme care is needed to avoid electric shock.
- Use care to avoid touching the fan or safety switch terminals during work with the cover removed.
- Select a stable, horizontal work site to prevent dropping the product and components.
- Use the power cord and interface cable supplied with the product.

Before starting work, be sure to also check the safety notices contained in the instruction manual.

SERVICE POLICY

The following service policy is being utilized.

Item	Part number		Service method
	DLA-M2000LU	DLA-M2000LE	
ANALOG PWB ASS'Y	SXG-1101A	←	Replace (module)
DPC MODULE PWB ASS'Y	SXG-1201A	←	Replace (module)
DD MODULE PWB ASS'Y	SXG-1301A	←	Replace (module)
B DRIVE PWB ASS'Y	SXG-3301A	←	Replace (module)
RG DRIVE PWB ASS'Y	SXG-3401A	←	Replace (module)
POWER PWB ASS'Y	SXG-9003A	←	Replace parts
LAMP POWER PWB ASS'Y	SXA-9107A	SXA-9108A	Replace parts
IGNITER PWB ASS'Y	SXA-9303A	←	Replace parts
MAIN LINE FILTER PWB ASS'Y	SXG-9505A	SXG-9506A	Replace parts
CONTROL & 3.3V MODULE PWB	SXG-0P001A	←	Replace (module)
LAMP UNIT ASS'Y	BHL5003-S	←	Replace (module)

FUNCTIONS

LED INDICATIONS

The LED operations are as follows.

■OPERATE LED

Lighted : Power on mode in progress.
Extinguished : Mode other than above.

■STAND-BY LED

Lighted : Stand-by mode in progress.
Flashing : Cool down mode in progress
Extinguished : Mode other than above.

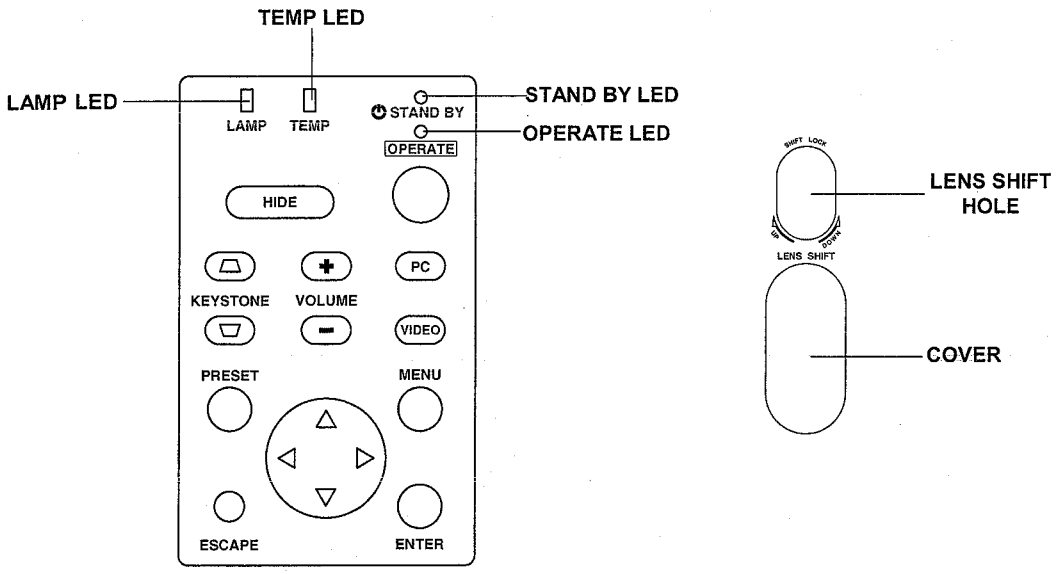
■LAMP LED

Lighted : Lamp replacement time near (less than 100 hours remain, i.e., used approximately 900 hours) . At power on, message appears by the on-screen display for about 2 minutes advising to "LAMP REPLACE" .
Flashing : Lamp end of life (approx. 1000 hours), power on inhibited.
Extinguished : Mode other than above (lamp anomaly absent) .

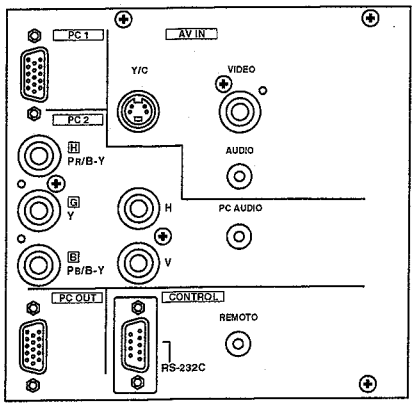
■TEMP LED

Flashing : Internal temperature abnormally high (shift to emergency mode) .
Extinguished : Internal temperature normal.

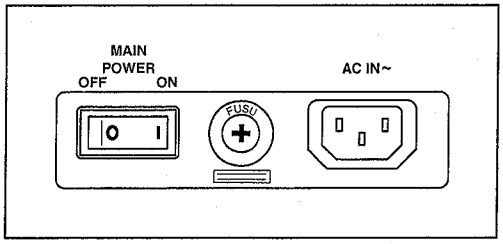
■TOP VIEW (Operation Panel)



■LEFT SIDE VIEW (Terminal Board)



■RIGHT SIDE VIEW (Main Power SW / FUSE Holder /AC Inlet)



TECHNICAL INFORMATION

OPTICAL ADJUSTMENT FUNCTION

Mechanical position adjustment of the optical block condenser lens (first lens of the optical block to receive lamp light, which is converted from scattered to parallel) by means of a cross head screwdriver has been added.
This was previously adjusted using the PSA software. As required, adjust with the PSA software.
Shading variation with a ceiling suspended installation is described below.
When installed on a stand, as shown in Fig. 1, the lamp arc is displaced toward the top cover due to convection currents in the lamp. In this case, the light can be focused toward the bottom cover side of the lamp central axis (dotted line in figure).
When suspended from a ceiling, the arc is displaced toward the bottom cover, as indicated in Fig. 2. At the same lens position as the stand example, the light through the lens differs from Fig. 1. This results in a difference in apparent shading when the light strikes the D-ILA device.
In previous models, the shading was adjusted if necessary by using the PSA software.
As shown in Fig. 3, the present model allows raising the condenser lens (lowering the lens in ceiling suspension) to adjust for nearly the same apparent shading as the Fig. 1 example.

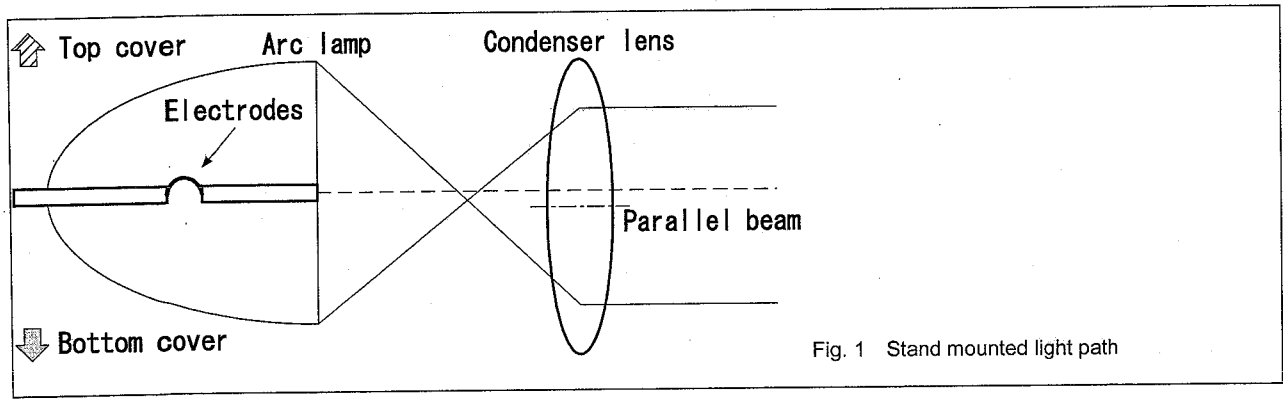


Fig. 1 Stand mounted light path

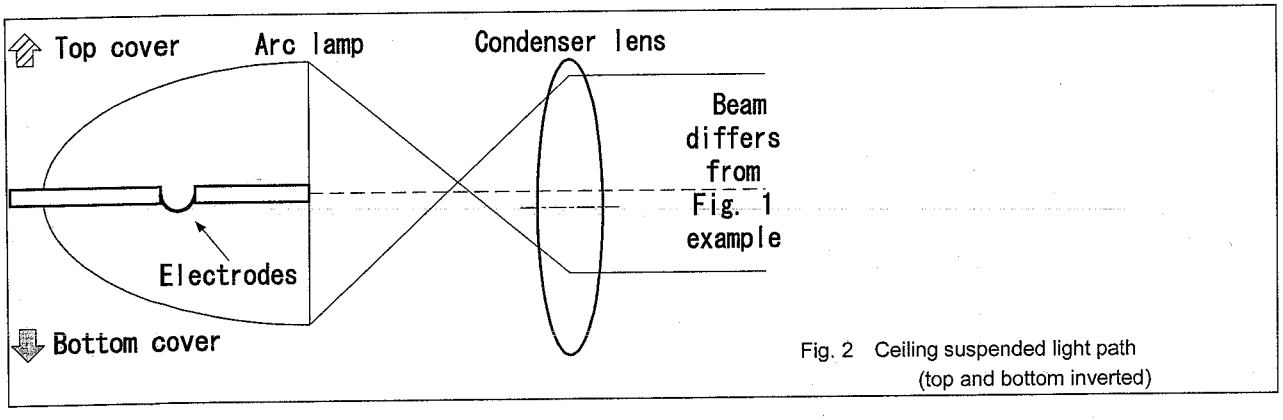


Fig. 2 Ceiling suspended light path
(top and bottom inverted)

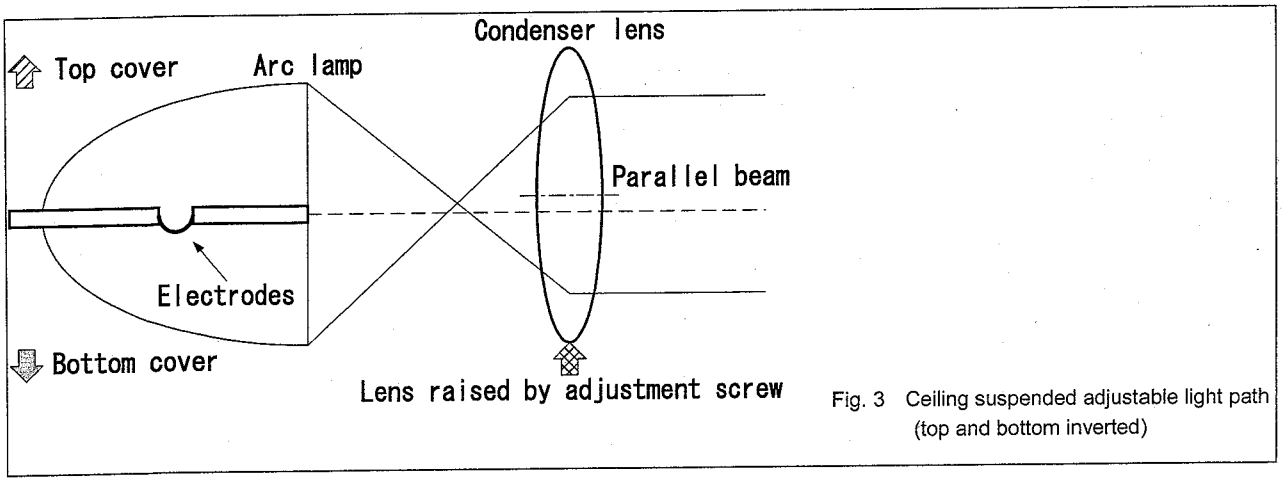


Fig. 3 Ceiling suspended adjustable light path
(top and bottom inverted)

SPECIFIC SERVICE INSTRUCTIONS

Installation cautions

■General

●The product contains 5 internal fans. There is risk of internal overheating if the fan intakes and exits are obstructed. In event the internal temperature increases excessively, a sensor functions to cut off the power. Therefore, when using the product, check that the fan intakes and exits are not blocked by dust and there is adequate free space around the unit to allow ample ventilation.

●Do not stand the unit on its side and avoid horizontal inclination of more than ±30 degrees.

■Ceiling suspension

An optional ceiling bracket is available for bearing the weight of the product. Read the bracket instructions and perform work accordingly.

Lamp

■Important general cautions

●⚠ The xenon lamp emits high intensity white, ultraviolet and infrared light.
Do not look directly at the light during service. Also, do not touch the lamp directly as it presents a burn hazard.

●⚠ The lamp is filled with high-pressure xenon gas. Use ample care when handling. Particularly avoid impacts to the sapphire glass.

■Replacement cautions

●After replacing the lamp, be sure to release the pressurized gas of the old lamp by the method described below and discard it according to local codes pertaining to industrial waste.

The lamp is comprised of the following materials.

Outer	: PC (outside), UP (inside), brass (insert nut)
Heat sink	: Aluminum, phosphor bronze (clip)
Lamp	: Ceramics (exterior) silver (reflecting mirror), sapphire glass, glass, tungsten (internal electrode), cobalt (external electrode), molybdenum (electrode supporter)
Others	: Iron (screws, net), brass (lamp assembly screws, electrode leads), polyslider (washers for lamp assembly screws), stainless steel (handle, glass securing springs), copper (Lamp assembly connecting electrodes)

●Releasing internal gas

The internal gas is released by cutting the glass bead at the rear of the lamp. Since this can fly off from the pressure and pose a hazard, protection is recommended to avoid injury.

◆Procedure

1. Place the lamp assembly on a stable work surface (**Fig. 1**).
2. Set wire cutters in place to cut the bead, but do not cut yet (**Fig. 2**).
3. Cover the lamp and wire cutters with a cloth (**Fig. 3**).
4. Hold the cloth in place to prevent flying off from the pressure, and cut the bead (**Fig. 4**).
5. Inspect that the gas has been released (**Fig. 5**).

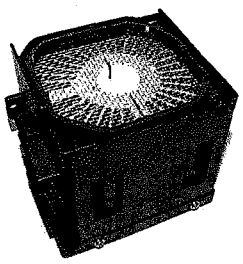


Fig 1

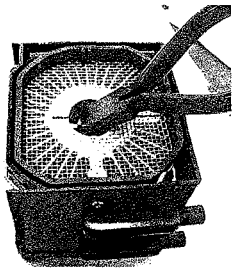


Fig. 2

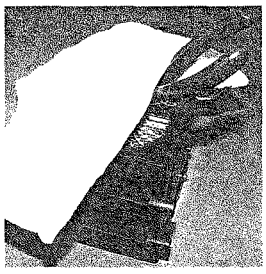


Fig. 3

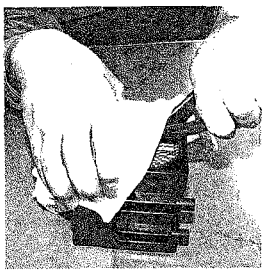


Fig. 4

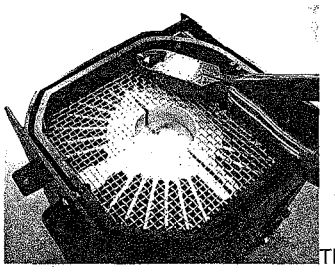
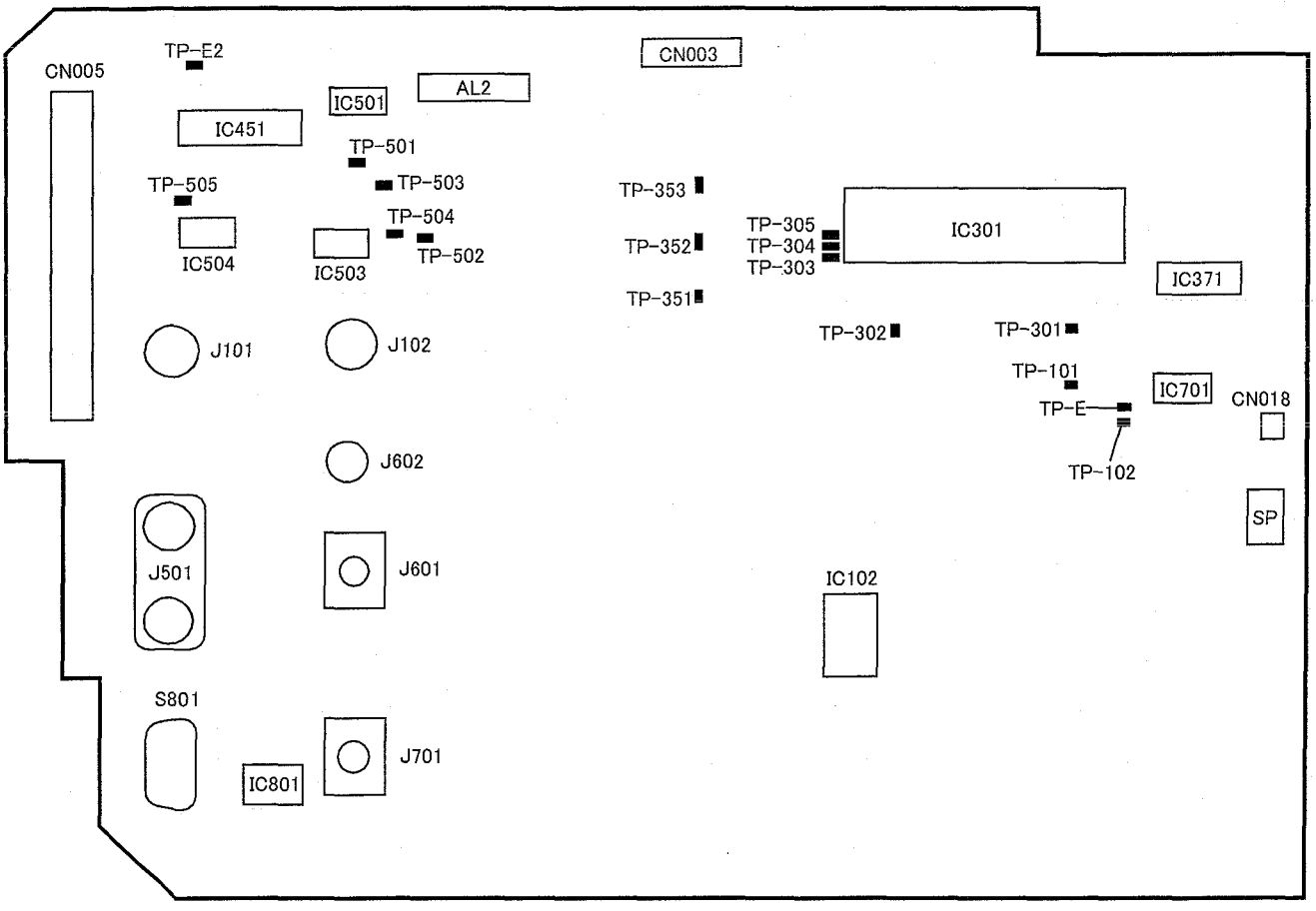


Fig. 5

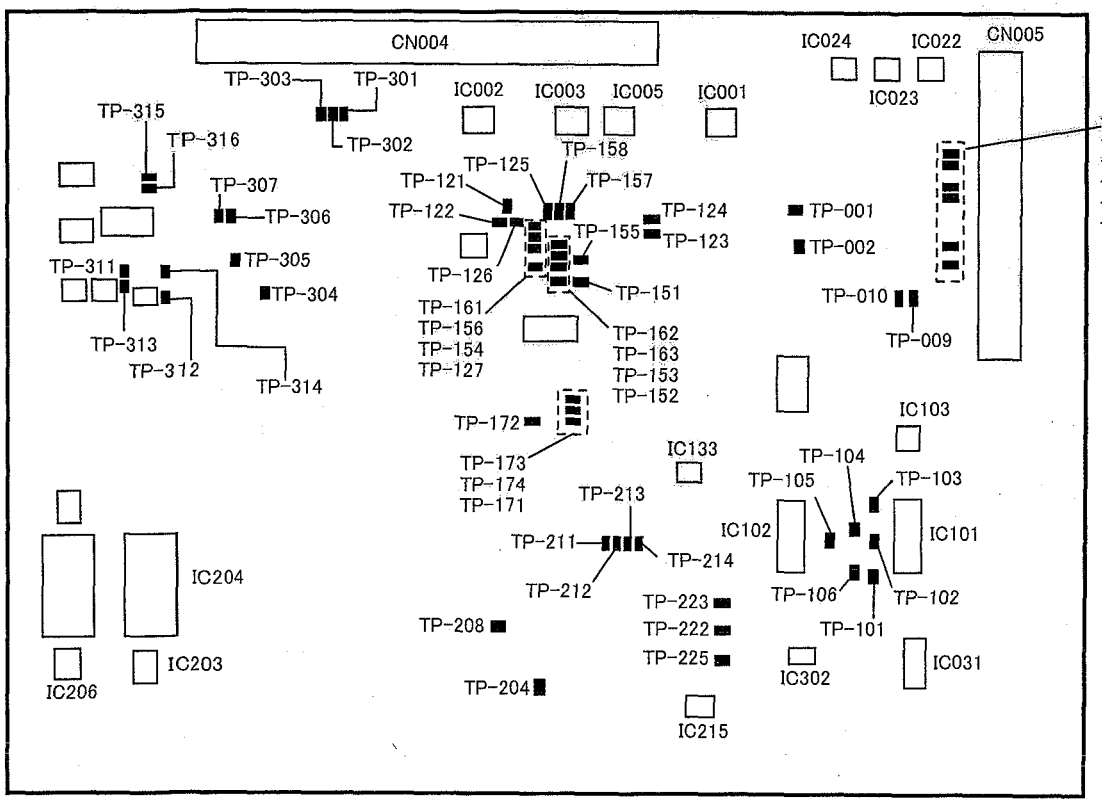
The pictures may look different from the original.

ADJUSTMENT LOCATIONS

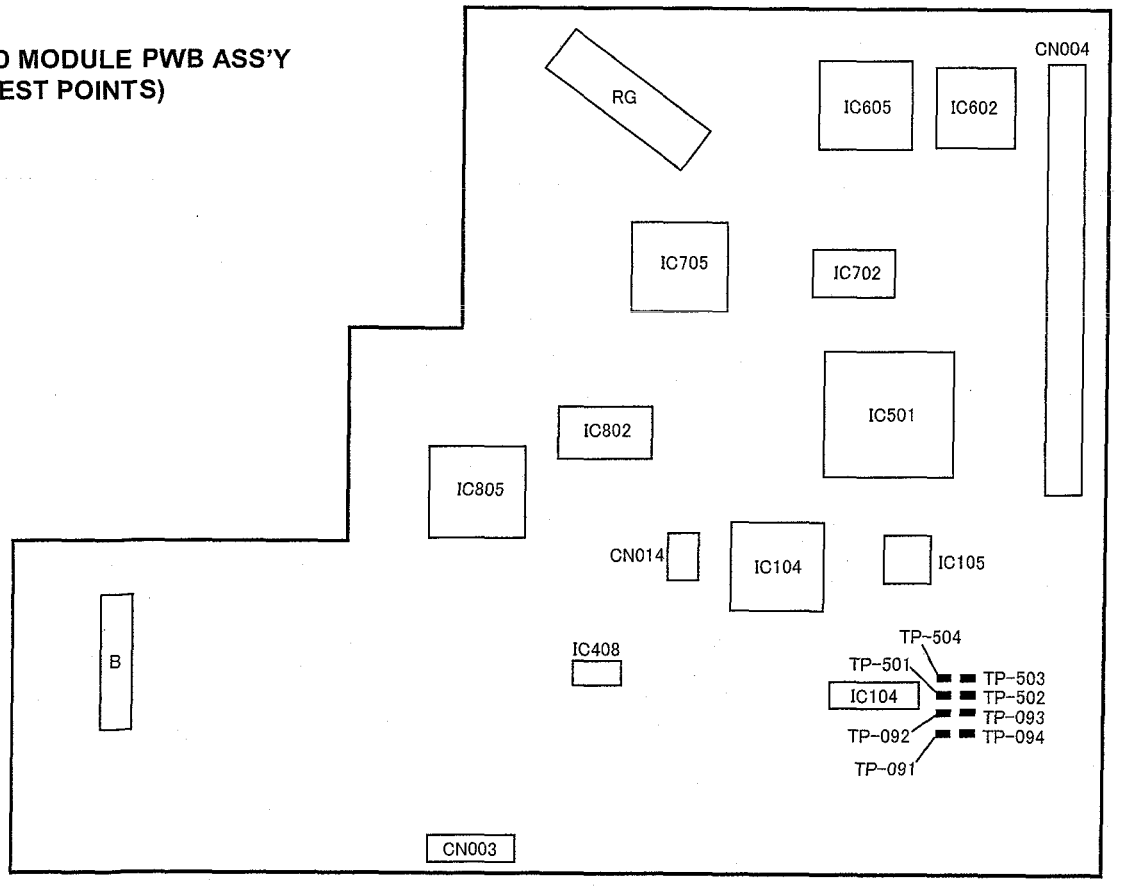
■ANALOG MODULE PWB ASS'Y (TEST POINTS)



■DPC MODULE PWB ASS'Y (TEST POINTS)



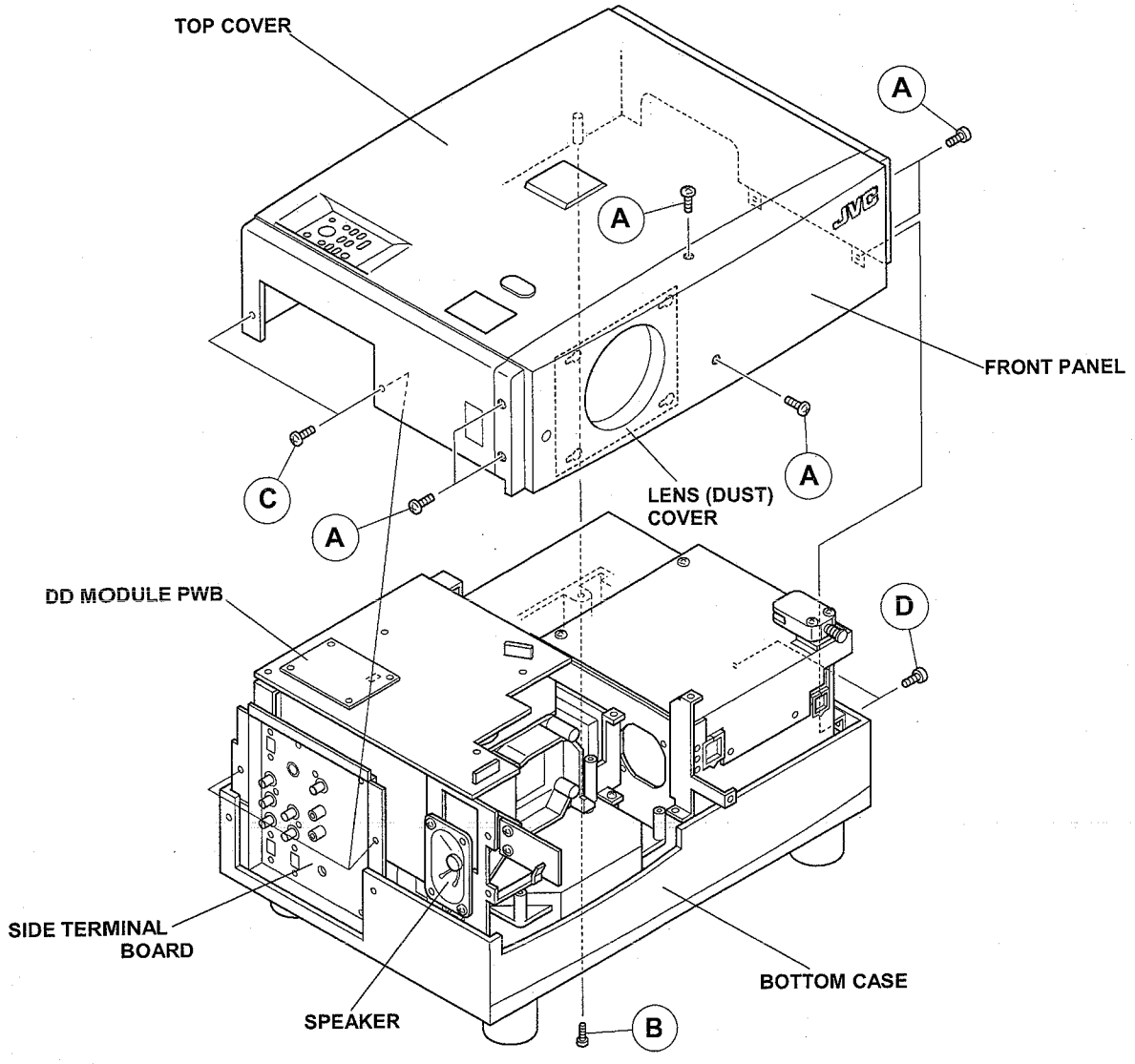
■DD MODULE PWB ASS'Y (TEST POINTS)



DISASSEMBLY PROCEDURE

＊Confirm the power cord in unplugged from the AC outlet before proceeding.

＊The lamp remains quite hot after power off. Allow sufficient time to cool before starting work.



FRONT PANEL / LENS (DUST) COVER

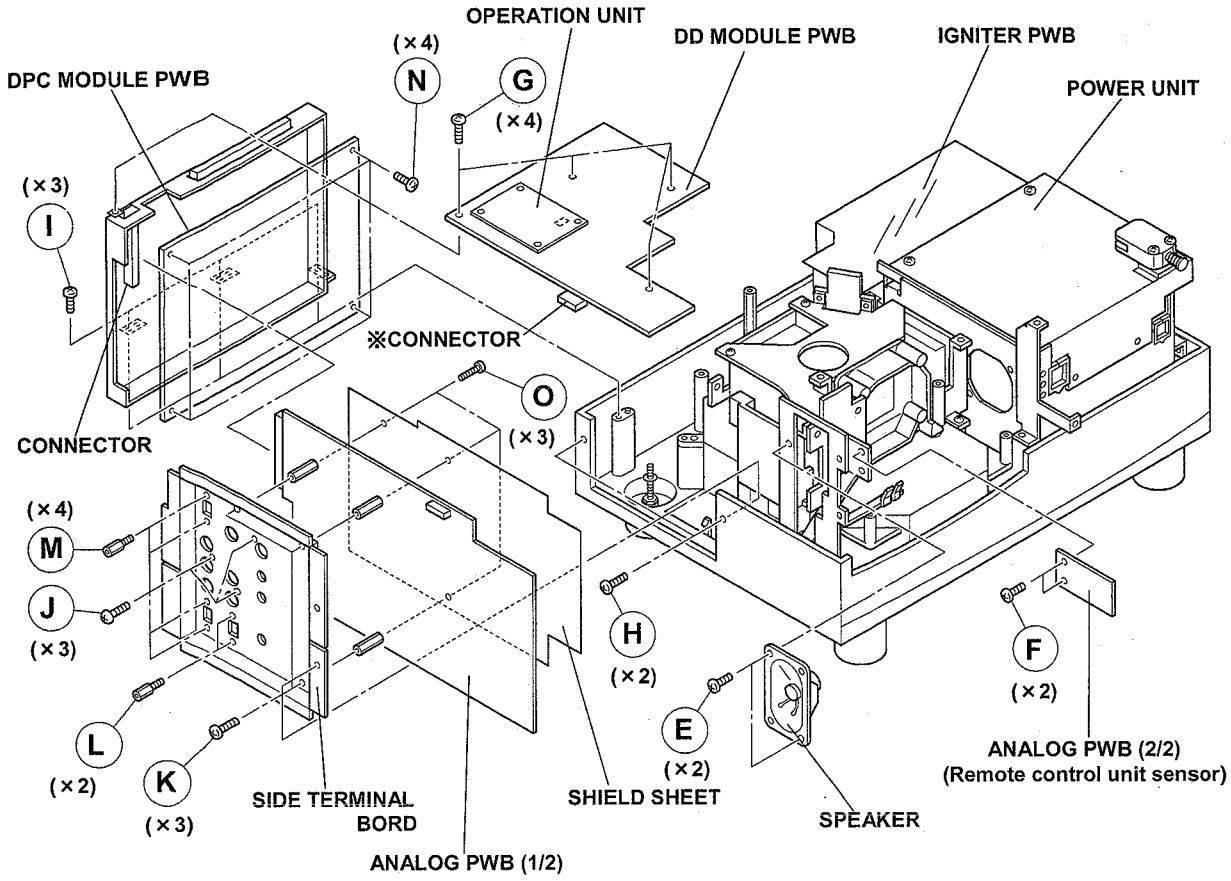
1. Remove the 6 screws marked **A**.
2. After pulling the front panel toward you, remove it.

※If necessary, remove the lens (dust) cover attached to the inside of the front panel after removing the 4 screws.

TOP COVER

● Remove the FRONT PANEL.

1. Remove the screw marked **B**.
2. Remove the 2 screw marked **C** and 2 screw marked **D**.
3. While holding both ends at the right and left sides of the top cover, lift up it to remove.



SPEAKER

- Remove the FRONT PANEL and TOP COVER.

1. Remove the 2 screws marked **E**.
2. After removing the 2 connecting wires (receptacle) (+/-), remove the speaker.

ANALOG PWB (2/2) ASS'Y

- Remove the FRONT PANEL.
- Remove the TOP COVER.

1. Remove the 2 screws marked **F**
2. After removing the 2 connectors, remove the ANALOG PWB (2/2). (which has remote control unit sensor device).

DD MODULE PWB ASS'Y

- Remove the FRONT PANEL.
- Remove the TOP COVER.

1. Remove the 4 screws marked **G**.
2. Remove the 9 connectors (Mark the connectors so as to properly return them to the original places during reassembling).
3. Remove the connector (marked ※ in the above figure) which connects the DD MODULE PWB to the ANALOG PWB(1/2).
4. Lift up the DD MODULE PWB to remove it.

SIDE TERMINAL BOARD

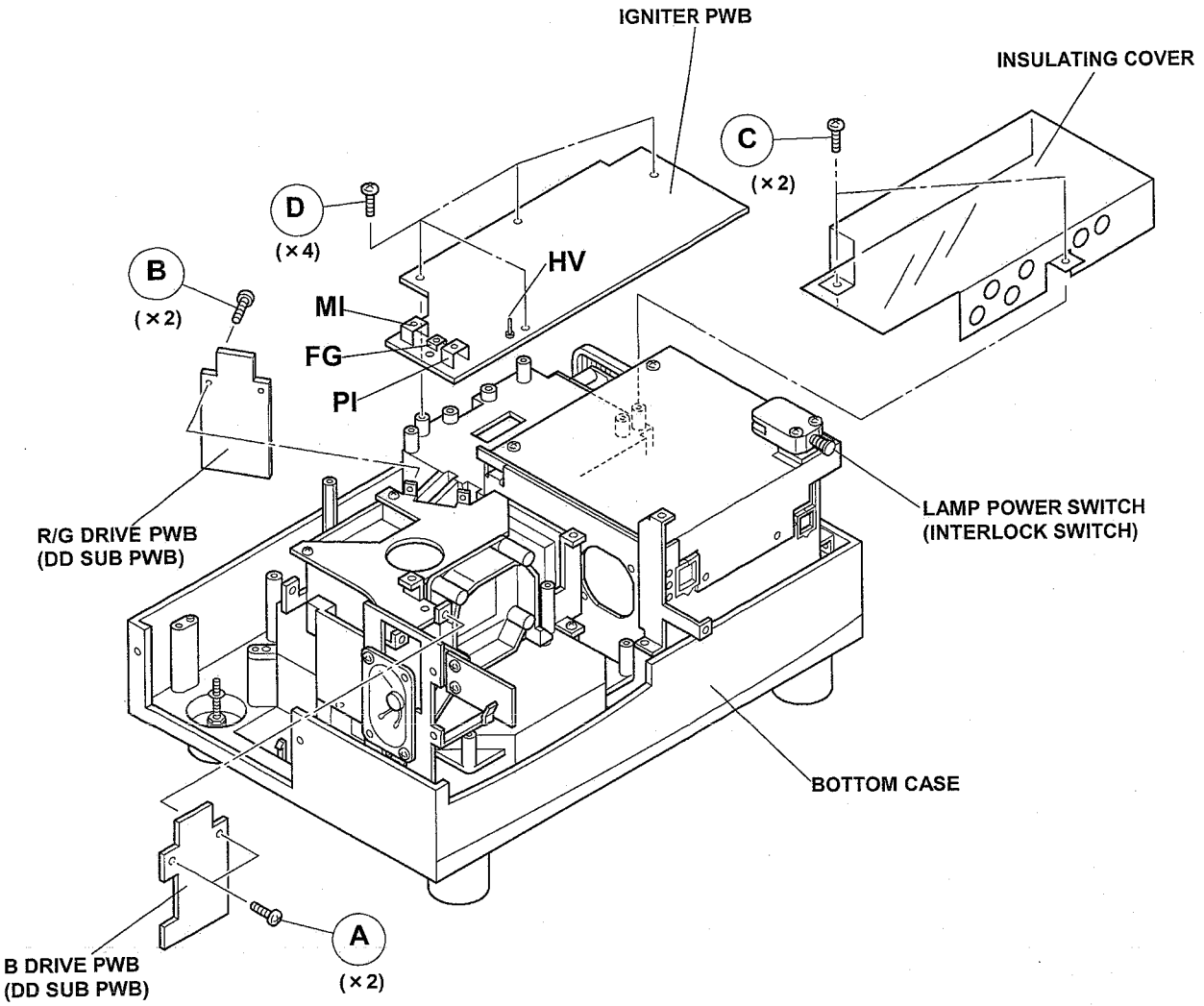
- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the DD MODULE PWB.

1. Remove the 2 screws marked **H** and 3 screws marked **I**, respectively
2. Lift up the ANALOG PWB(1/2) , DPC MODULE PWB and SIDE TERMINAL BOARD as a unit.
3. Remove the 3 screws marked **J** and 3 screws marked **K**, respectively.
4. Remove the 2 hexagon bolts marked **L** and 4 hexagon screws marked **M**, respectively.
5. After pulling the SIDE TERMINAL BOARD toward you, remove it.

ANALOG PWB ASS'Y and DPC MODULE PWB ASS'Y

- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the DD MODULE PWB ASS'Y.
- Remove the SIDE TERMINAL BOARD.

1. After removing the connector, separate the ANALOG PWB from the DPC MODULE PWB.
2. After removing the 4 screws marked **N**, pull out the DPC MODULE PWB.
3. After removing the 3 screws marked **O**, pull out the SHIELD SHEET.
4. Remove all connectors involved and remove the ANALOG PWB(1/2) (Mark the connectors so as to properly return them to the original places when reassembling).



R/G DRIVE MODULE PWB and B DRIVE MODULE PWB

- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the DD MODULE PWB ASS'Y.

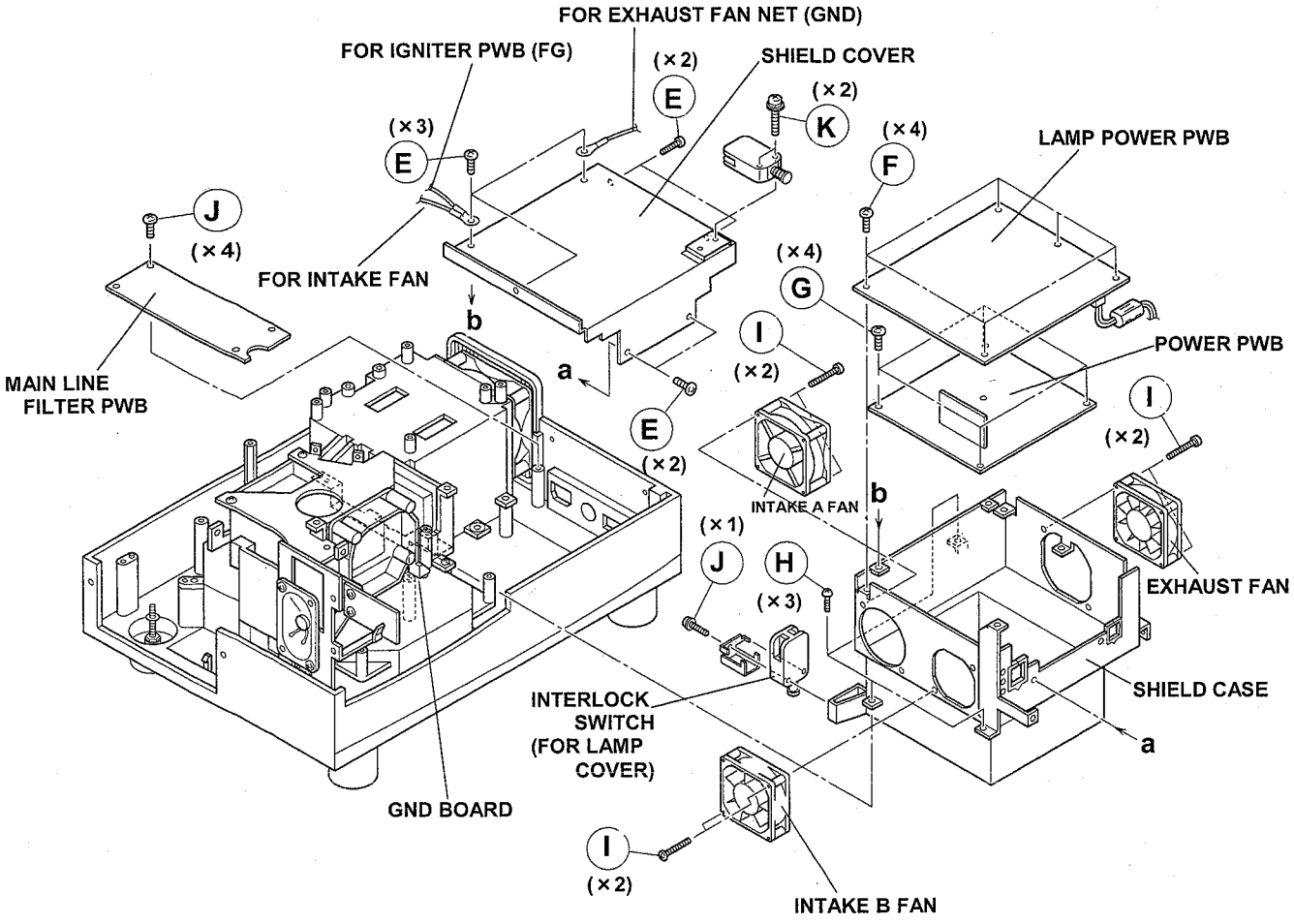
1. Remove the 2 screws marked **A**, and remove the B DRIVE MODULE PWB.
2. Remove the 2 screws marked **B**, and remove the R/G DRIVE MODULE PWB.
3. Slide both ends of the D-ILA device connector towards the flat wire to release the lock.
4. Disconnect the flat wire from the connector and the R (G, B) DRIVE PWB ASS'Y.

※ The flat wire is easily damaged. Use care when disconnect.

IGNITER PWB ASS'Y

- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the DD MODULE PWB ASS'Y.

1. Remove 2 screws marked **C**, and take out the INSULATING COVER.
2. Remove the 4 screws marked **D**.
3. Remove connecting screws (power supply input) PI, MI and FG.
4. Disconnect connectors 901 and VH.
5. Remove 2 lamp connecting plugs (PO and MO) and remove the IGNITER PWB ASS'Y.



LAMP POWER PWB ASS'Y

1. Remove the 7 screws marked **E**, and pull out the SHIELD COVER.
2. Remove the 4 screws marked **F**.
3. Disconnect connectors PW10, 901, 203 and VH, and remove 2 IGNITER PWB ASS'Y wire screws PO and MO, then pull out the LAMP POWER PWB ASS'Y.

POWER PWB ASS'Y

- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the LAMP POWER PWB ASS'Y.
- Remove the EXHAUST FAN.
- Remove the INTAKE FANs A and B.

1. Remove the 4 screws marked **G**.
2. Disconnect the connectors which are necessary to remove the POWER PWB.
3. Lift up and remove the POWER PWB ASS'Y.

COOLING FANs (For Intake A, B / Exhaust)

- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the IGNITER PWB.
- Remove the connectors need to remove them.

1. Remove the 3 screws marked **H**.
2. Slightly lift up the SHIELD CASE, and then remove the 2 screws marked **I** of the INTAKE A&B FAN.
3. Disconnect the connectors which connected to the EXHAUST FAN, and remove the EXHAUST FAN.

LAMP COVER INTERLOCK SWITCH

- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the IGNITER PWB.
- Remove the connectors need to remove them.

1. Remove the 3 screws marked **H** and lift up the SHIELD CASE so that able to remove the screws with lamp cover.
2. Remove the **J** screw, and remove the INTERLOCK SWITCH with the lamp cover.
3. Remove the 2 screws marked **K**.
4. Remove the INTERLOCK SWITCH with the lamp power supply.

OPTICAL BLOCK

- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the DD MODULE PWB ASS'Y.
- Remove the SIDE TERMINAL BOARD, ANALOG PWB and DPC MODULE PWB ASS'Ys.
- Remove the RGB DRIVE section.
- Remove the IGNITER PWB ASS'Y.
- Remove the POWER PWB ASS'Y.
- Remove the left and right speaker sections.
- Remove the power block's upper shield case.

1. Remove the 6 screws marked **A**.
2. Lift up and pull out the OPTICAL BLOCK.

EXHAUST FAN (OPTICAL BLOCK)

- Remove the FRONT PANEL.
- Remove the TOP COVER.

1. Remove the FAN COVER.
2. Remove the 4 screws marked **B** with washers.
3. Disconnect the connectors and remove the EXHAUST FAN.

INTAKE FAN (OPTICAL BLOCK)

- Remove the OPTICAL BLOCK.

1. Remove the 2 screws marked **C**.
2. Disconnect the connectors and remove the INTAKE FAN.

LAMP TEMP SENSOR (THERMOSTAT)

- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the DD MODULE PWB ASS'Y.
- Remove the IGNITER PWB ASS'Y.

1. Remove the lamp ASS'Y from bottom side of the unit.
2. Remove the 2 nuts marked **D**, and then remove the SENSOR BRACKET.
3. Remove the 2 screws marked **E**, when fixed the nuts.
4. Remove the relay connector, then remove the LAMP TEMP SENSOR.

※ The OPTICAL BLOCK contains prism mirrors and other components that are sensitive to shock. With the lens installed, the overall weight is shifted toward one side. Use care not to drop or subject to physical shock.

※ Spacers are easily damaged when removing the OPTICAL BLOCK. Be sure to replace spacers when severely damaged.

※ The OPTICAL BLOCK does not include the LAMP ASS'Y.

REMOVABLE FOOT

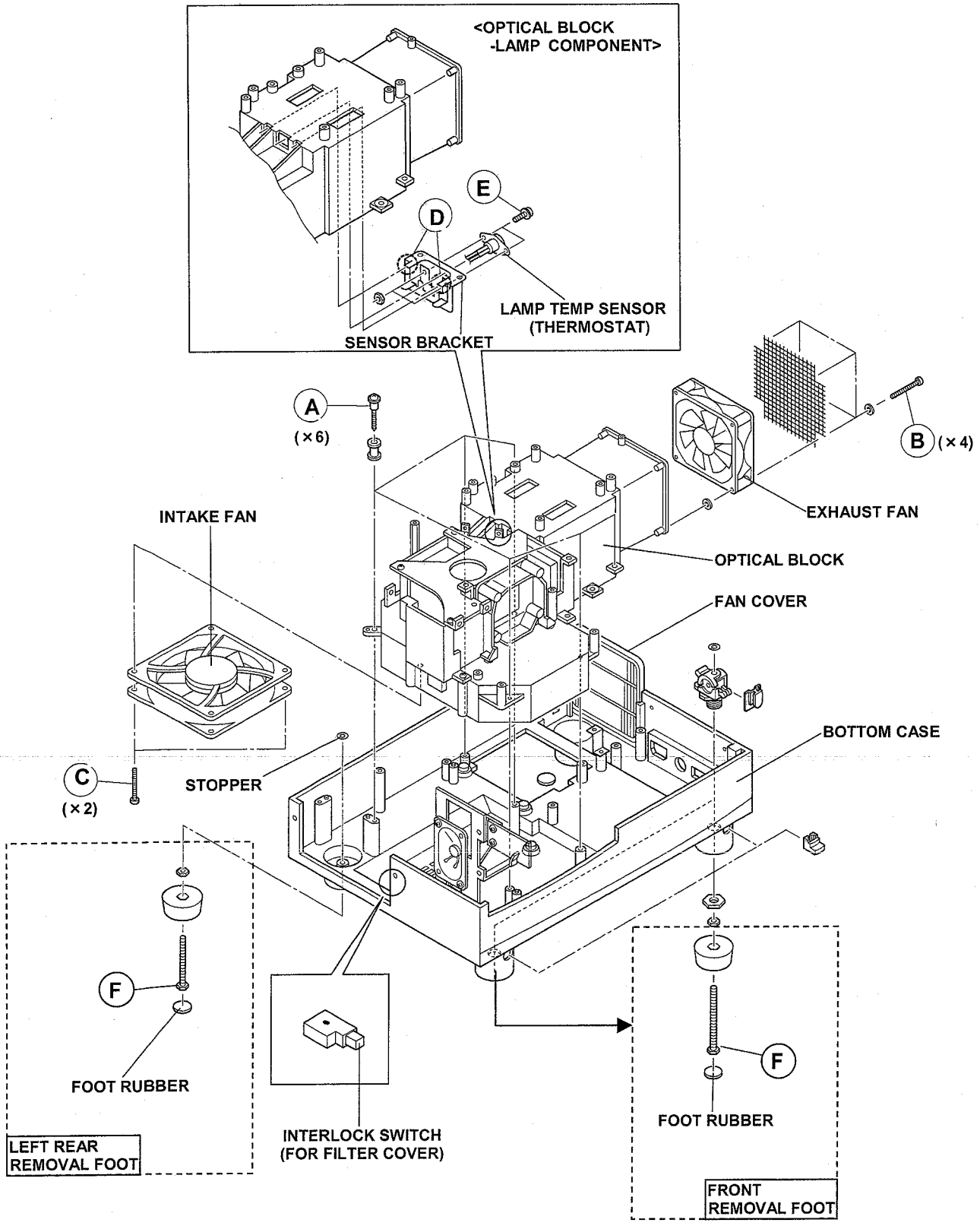
- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the DD MODULE PWB ASS'Y.
- Remove the SIDE TERMINAL BOARD, ANALOG PWB and DPC MODULE PWB ASS'Ys.
- Remove the IGNITER PWB ASS'Y.
- Remove the POWER PWB ASS'Y.
- Remove the SHIELD COVER upon the POWER BLOCK.
- Remove the OPTICAL BLOCK.

1. Remove the FOOT RUBBER.
2. Remove the STOPPER.
3. Remove the bolts marked **F** and remove the REMOVABLE FOOT (As same steps, remove the front and rear foot).

INTERLOCK SWITCH (For FILTER COVER)

- Remove the FRONT PANEL.
- Remove the TOP COVER.
- Remove the DD MODULE PWB ASS'Y.
- Remove the SIDE TERMINAL BOARD, ANALOG and DPC MODULE PWB ASS'Ys.
- Remove the IGNITER PWB ASS'Y.
- Remove the POWER PWB ASS'Y.
- Remove the SHIELD COVER upon the POWER BLOCK.
- Remove the OPTICAL BLOCK.

1. Raise the claws and remove the INTERLOCK SWITCH. (When reassemble it, put together the guide holes with boss on the bottom case.).


<OPTICAL BLOCK
-LAMP COMPONENT>
E
D
LAMP TEMP SENSOR
(THERMOSTAT)
SENSOR BRACKET
A
(×6)
B (×4)
EXHAUST FAN
INTAKE FAN
OPTICAL BLOCK
FAN COVER
BOTTOM CASE
C
(×2)
STOPPER
F
FOOT RUBBER
LEFT REAR
REMOVAL FOOT
INTERLOCK SWITCH
(FOR FILTER COVER)
F
FOOT RUBBER
FRONT
REMOVAL FOOT

SERVICE ADJUSTMENTS

Optical adjustment

Instruments and tools

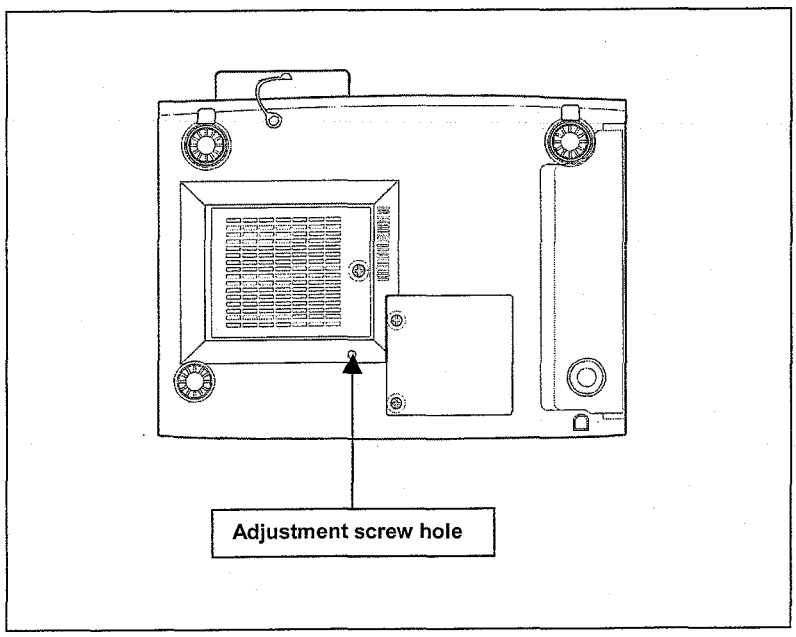
- DC voltmeter (digital voltmeter)
- Oscilloscope
- VGA signal generator : 60% white pattern
- Cross head screw driver : At least 30 mm shaft length

Adjustment steps

1. Lens height

Adjust if shading is objectionable in ceiling suspension. Use the VGA signal generator.

(1) With set placed on stand, supply a 60% white signal. Project on screen and check the shading level.
(2) Suspend set from ceiling (top/bottom inverted), supply a 60% white signal and project on screen.
(3) Turn the adjustment screw counter-clockwise and adjust to minimize shading.
Note : If the screw is turned excessively, the threads disengage and prevent further adjustment. In this event, turn the screw clock to re-engage the threads and enable adjustment.
(4) If required, conduct item "Shading adjustment".
Note : The initial position of the screw is fully clockwise.
This is the factory setting for checking the level during stand installation.



< Bottom view >

Electrical adjustment

Before starting adjustment

1. **Data back up is required before adjustments.**
2. Adjustment items utilize a personal computer. Refer to the instruction manual of the adjustment software regarding software handling and set up.
3. This instruction is for **PSA4** Control Program. Use the latest version program.
4. Allow the equipment and test instruments adequate time (at least 30 minutes) to warm-up.
5. Confirm the set is properly connected to the specified AC power source.
6. Use care not to disturb internal controls and parts not specifically mentioned.
7. Unless specifically mentioned in the adjustment steps, do not change any data.
8. Refer to the standard schematic diagram for test point locations.

Instruments and tools

For all model

- DC voltmeter (digital voltmeter)
- Oscilloscope
- VGA signal generator: Following flat patterns : 100% white, 60% white, 0% black
  Following flat patterns for each RGB colors and white: 100%, 93%, 87%, 80%, 70%, 63%, 57%, 50%, 43%, 37%, 30%, 20%, 13%, 7%, 0%
  Grey scale / G scale : 15steps or more (above 15 signal levels must be included)
- Screen
- Darkroom (illumination less than 0.03 lx)
- Light-meter [for example: Minolta T-1]
- Personal computer

Operating system	Windows 95
Memory	More than 16 Mbytes
Hard disk free space	More than 5 Mbytes
RS-232C interface	At least 1 port
Display resolution	Minimum : 800 × 600 pixels Recommended : 1024 × 768 pixels or better
Display colors	Minimum : 8 bits/pixel Recommended : 16 bits/pixel or better
Input devices	Keyboard and mouse

- D-ILA **PSA4** control software
- RS-232C 9pin NULL-MODEM (cross) cable
- Photoelectric conversion device (one of these)
  Lightmeter Minolta T-1 A-out (Analog output)
  Photoelectric conversion device (for example: HAMAMATSU PHOTONICS S1226-5BK)
  Phototransistor or CdS photoconductor with amplifier
- Color filters: G color filter (ex. MELLES GRIOT 03 FIV 044)
  R color filter (ex. MELLES GRIOT 03 FIB 014)
  B color filter (ex. MELLES GRIOT 03 FIV 028)
- NTSC signal generator (composite and S-VIDEO output): Grey scale (0IRE – 100IRE)
- **DTV (1080i) signal generator** (Y, PB, PR outputs): Grey scale (0IRE – 100IRE)

REQUIRED ADJUSTMENTS BY REPLACING COMPONENTS

The following adjustment procedure is required after replacing PWB ASS'Ys, LAMP BALLAST UNIT and OPTICAL BLOCK. Items noted as "Check" means check the condition, then adjust if required.

Adjustment items	MAIN	TERMINAL	VIDEO	DRIVE	POWER	LAMP BALLAST	OPTICAL BLOCK
D-ILA COMMON DC				○	●	●	●
GAMMA (GRADATION / WHITE BALANCE)	○			○	●	●	●
SHADING (UNIFORMITY)	○	○	○	○			●
8 –PHASE VERTICAL BARS	○	○	○	○			●
PIXEL SHIFT	○						●
FLYBACK PULSE		○	●				
PEDESTAL LEVEL		○	●				
GAIN		○	●				
PC PICTURE	●						
DEVICE FRAME	●			○			●

● : Required adjustment ○ : Check

■ LIST OF REQUIRED INSTRUMENTS AND TOOLS (except those related to the personal computer)

Adjustment items	DC voltmeter	Oscillo-scope	PAL signal generator	SVGA signal generator	Light-meter	Others	Project
D-ILA COMMON DC		●			(●)	L	●
GAMMA (GRADATION / WHITE BALANCE)		◎		●	◎	F	●
SHADING (UNIFORMITY)				●	●	F	●
8 –PHASE VERTICAL BARS				●			●
PIXEL SHIFT				SXGA			●
FLYBACK PULSE		●	●				
PEDESTAL LEVEL		●	●				
GAIN		●	●				
PC PICTURE				●			
DEVICE FRAME				●			●

● : Required ◎ : When factory service needed **L** : Light sensor output **F** : Color filter

■ DATA BACKUP

Before replacing major components such as PWB ASS'Ys, UNIT or BLOCK, be sure to backup the data contained in the set. In absence of data backup, complete adjustment becomes necessary.

- **DATA SAVE**
  1) Set for the stand-by mode.
  2) Click to select [EEPROM] of the adjustment software, and the [ROM data] menu opens.
  3) Click [Receive ROM data] to read the projector data.
  4) Click [Save] to save the data.
- **DATA ENTRY**
  1) Set to the stand-by or operate mode.
  2) Click to select [EEPROM] of the adjustment software. The [ROM data] menu opens.
  3) Click [Load] to read the projector data to be saved.
  4) Click [Transmit ROM data] to write the data into the projector.

ADJUSTMENT PROCEDURE

D-ILA COMMON DC adjustment

Instruments	**Oscilloscope** **Light-meter** **Photoelectric conversion device**	**REPLACING COMPONENTS** ● **MAIN PWB ASS'Y** ● **DRIVE PWB ASS'Y** ● **OPTICAL BLOCK**
Test point	**Photoelectric conversion device output**	
Adjustment menu	**<DDIC>**	
Preparation	**Running the unit enough before adjustment**	

(1) Open Menu [DDIC] [DD_Ctrl], and click [R Hide] , [G Hide] and [B Hide] , then set to [On].
(2) Turn to the [IPM0], [IPM1] to [Off].
(3) Open Menu [DDIC] [Blanking], and click [R] , then set [BLACK] to **127**.
(4) Connect the light detective device to the oscilloscope and place in front of the lens where the most easily point to detect the flicker.
Note : Do not adjust under the lamp have flickers.
(5) Open Menu [DDIC] [DD_Ctrl], and asking the [R Com] .
(6) Measure the light volume. Then adjust [R Com] to minimize the waveform amplitude with the oscilloscope coupling both of DC and AC.
(7) Open Menu [DDIC] [Blanking], and click [R] , then set [BLACK] to **0**.
(8) Similarly click [G] / [B] and set [BLACK] to **127**, and respectively adjust [G Com] and [B Com] .
Note : Large deviation of this adjustment can cause image flicker.
Element burn can occur when out of adjustment.

GAMMA adjustment

Note : Should be adjust under the darkroom and required to use the light-meter. If not available, do "FIELD SERVICE" contents.

GAMMA adjustment (FACTORY SERVICE)

Instruments	**SVGA signal generator [Gray scale]** **Light-meter** **Color filter (R / G / B)**	**REPLAING COMPONENTS** ● **MAIN PWB ASS'Y** ● **DRIVE PWB ASS'Y** ● **OPTICAL BLOCK**
Test point		
Adjustment menu	**<User adjustment> <Gamma> <DDIC>**	
Preparation	**Completed D-ILA COMMON DC adjustment**	

(1) **PREPARATION**
1) Set to ZOOM Wide end, if put the zoom lens.
2) Set the light-meter on the center of image.
(The distance from the projection lens to the light-meter is approximate 30cm, then don't move them.)
3) Open menu [User adjustment] [Picture] and set [Color Temp] to [Middle] .
4) Open Menu [DDIC] and set [LUM] , [DYN] and [STC] to [Off].
5) Open Menu [DDIC] [DD_Ctrl], and click [R Hide] , [G Hide] and [B Hide] , then set them to [On].
6) And set the [IPM0] and [IPM1] to [Off].

(2) **G MAX CONTRAST MEASUREMENT**
1) Set the G color filter in front of the light-meter, and measuring the luminance of the center of the screen.
2) Open Menu [DDIC] [DD_Ctrl], click and make a note of the [R Offset] , [G Offset] and [B Offset] .
3) Set [R Offset] and [B Offset] to **255**.
4) Open Menu [DDIC] [Blanking], click [G] then set [BLACK] to **255**.
5) Open Menu [DDIC] [DD_Ctrl], adjust [G Offset] to maximum luminance and make a note as **Ymax**.
6) Open Menu [DDIC] [Blanking], click [G] , then set [BLACK] to **0**.
7) Adjust [G Offset] to minimum luminance and make a note as **Ymin**.

(3) **G ADJUSTMENT TARGET COMPUTATION**
1) Input G Ymax and G Ymin to the luminance table and compute the 15 to 0 target adjustment values.

(4) **G LUMINANCE ADJUSTMENT**

● **0 % luminance**

1) Open Menu [DDIC] [Blanking], and Click [G] , then set [BLACK] to **0**.
2) Open Menu [DDIC] [DD_Ctrl], and adjust [G Offset] to computed value. (tolerance:±2%)

● **100 % luminance**

1) Open Menu [DDIC] and confirm [GIN] is [ON] .
2) Open Menu [DDIC] [Blanking], and Click [G] , then set [BLACK] to **255**.
3) Open Menu [DDIC] [Gain] , uncheck the [ ] Only 1 bar.]
4) Adjust any [Gain 1] to [Gain 8] to the luminance become the value which adjustment point 15 (tolerance:±2%).
   Note: All [Gain 1] to [Gain 8] must be the same value.
   Note: In case of the luminance not to down enough, adjust by the gamma table.

● **94 % - 6 % luminance**

1) Open Menu [DDIC] [Blanking], and Click [G] , then set [BLACK] to **239**.
2) Open Menu [Gamma] , Click [G]. Adjust Y Position value of the control point 30 to computed value (tolerance:±2%).
3) Set [BLACK] to **15**. Adjust Y Position of the control points 28 to the computed value (tolerance:±2%). And repeat it as same steps to the control point 28 to 2.
4) Transmit the data each Y position value.

(5) **Data re-input**

1) Open Menu [DDIC] [DD_Ctrl], then input the value to the [R Offset] and [G Offset] noted above steps.

(6) **R and B GAMMA**

1) Adjust the R and B GAMMA in the same manner as G adjustment.

(7) **After adjustment**

1) Open Menu [DDIC] and set [LUM], [GAM], [DYN] and [STC] to [On].
2) Open Menu [DDIC] [DD_Ctrl], and click [R Hide] , [G Hide] and [B Hide] , then set to [Off]
3) Supply SVGA gray scale signal, and confirm normal gradation and white balance for each signal level.

GAMMA adjustment (FIELD SERVICE)

Instruments	**SVGA signal generator [Gray scale]**	**REPLAING COMPONENTS**
Test point		● **MAIN PWB ASS'Y**
Adjustment menu	**<User adjustment> <DDIC> <Gamma>**	● **DRIVE PWB ASS'Y**
Preparation	**Completed D-ILA COMMON DC adjustment**	● **OPTICAL BLOCK**

(1) Supply SVGA gray scale signal only G component and project it on the screen.
(2) Open menu [User adjustment] [Picture] and set [Color Temp] to [Middle] .
(3) Open Menu [DDIC] [DD_Ctrl], and click and make a note of the [R Offset] , [G Offset] and [B Offset] .
(4) Set [R Offset] and [B Offset] to **255**.
(5) Open Menu [DDIC] , and set [LUM] to [Off] .
(6) Open Menu [Gamma] then select [G] and adjust each control point 28 for natural gradation at each signal level.
   Note : Transmit the data for each Y Position adjustment of the screen.
(7) Open Menu [DDIC] [DD-Ctrl], then input the value to the [R Offset] and [B Offset] noted above steps.
(8) Supply SVGA gray scale signal include all RGB component.
(9) Adjust R gamma and B gamma similarly as G gamma for natural white balance at each signal level.
   Note : Transmit the data for each Y Position adjustment of the screen.
(10) Open Menu [DDIC] and return [LUM] to [On] .

SHADING adjustment

Instruments	VGA Signal generator Light-meter	REPLAING COMPONENTS ● MAIN PWB ASS'Y ● DRIVE PWB ASS'Y ● OPTICAL BLOCK
Test point		
Adjustment menu	<Shading> <DDIC> <AV>	
Preparation	Completed D-ILA COMMON DC adjustment	

(1) **PREPARATION**

1) Input the VGA signal and project it on the screen.
2) Set the [R] , [G] and [B] to **0**. Then transmit the data.
3) Open Menu [Shading] , set [R] , [G] and [B] of [LUM] to the default condition as Fig. 1 and click [Transmit] for RGB.
4) Open Menu [Shading] , set [R] , [G] and [B] of [DYN] to the default condition as Fig. 1 and click [Transmit] for RGB
5) Open Menu [Shading] , set [R] , [G] and [B] of [STC] to the default condition as Fig. 2 and click [Transmit] for RGB
6) Open Menu [DDIC] , and set the [GIN], [STC], [DYN], [GAM] to [On], and set the [LUM] to [Off] .

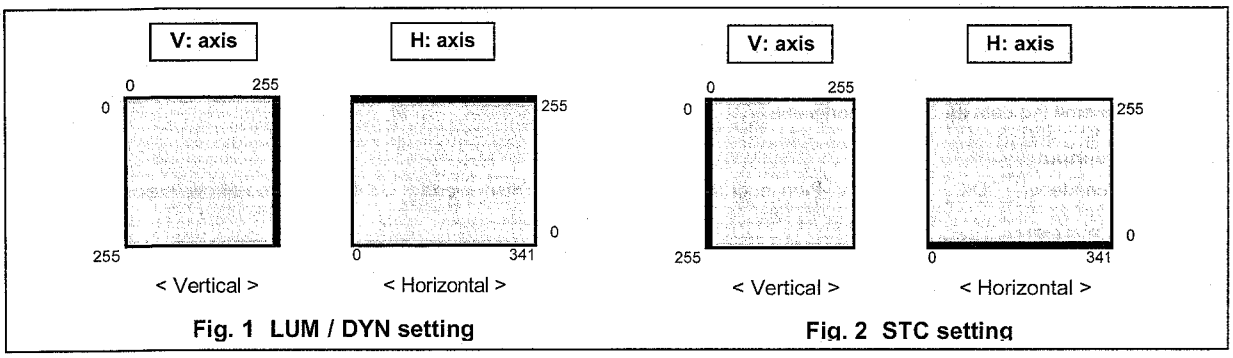


Fig. 1 LUM / DYN setting

Fig. 2 STC setting

(2) **BLACK SHADING Adjustment**

1) Open Menu [DDIC] [DD_Ctrl], and click [R Hide] , [G Hide] and [B Hide], then set to [On].
2) Set the [IPM0] and [IPM1] to [Off].
3) Open Menu [DDIC] [Blanking], and set [BLACK] to **0** for [R] , [G] and [B] .
4) Open Menu [Area Shading] and adjust to minimize the shading on the screen.
5) If required, open Menu [Shading] and adjust the static shading on the screen.

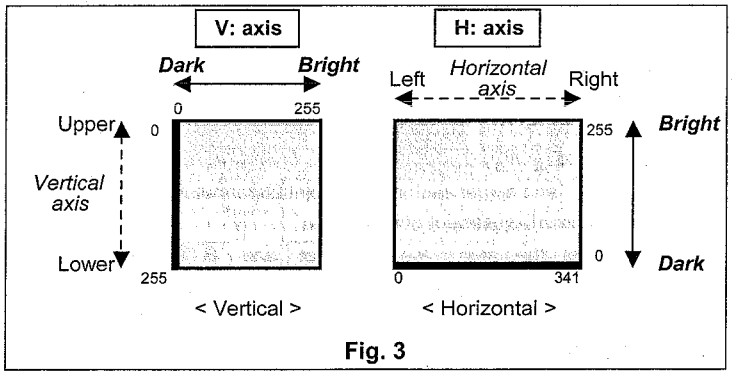


Fig. 3

(3) **WHITE SHADING adjustment**

1) Open Menu [DDIC] [DD_Ctrl], and click [R Hide] , [G Hide] and [B Hide], then set to [On].
2) Then open Menu [DDIC] and set [R] [BLACK] to **0**.
3) Open Menu [Shading] , click [DYN] and click [G] .
4) Vary the Y data and interpolation of H-axis and adjust to minimize the horizontal shading on the screen.
   Note : One of the Y value of Right end, Center right, Center, Center left or Left end must be **255**.
   Transmit the data at each adjustment.
5) Vary the Y data and interpolation of V-axis and adjust to minimize the vertical shading on the screen.
   Note : One of the Y value of Right end, Center right, Center, Center left or Left end must be **255**.
   Transmit the data at each adjustment.

(4) **WHITE SHADING R adjustment**

1) Input the VGA signal only R component, and project it on the screen.
2) In the same manner as G, adjust Menu [Shading] [DYN] and [R].

(5) **WHITE SHADING G adjustment**

1) Input the VGA signal only B component, and project it on the screen.
2) In the same manner as G, adjust Menu [Shading] [DYN] and [B].

(6) **SCREEN CENTER LUMINANCE adjustment**

1) Open Men Menu [DDIC] [DD_Ctrl], and click and make a note of the [R Offset] , [G Offset] and [B Offset].
2) Set [R Offset] and [B Offset] to **255**.
3) Open Menu [DDIC] [DD_Ctrl], and click [R Hide] , [G Hide] and [B Hide] , then set to [On].
4) Open Menu [DDIC] [Blanking], click [G] and set [BLACK] to **0**.
5) Open Menu [DDIC] , then set [STC] and [DYN] to [Off].
6) Set the G color filter in front of the light-meter, then measure the screen center luminance.
7) Open Menu [DDIC] , then set [STC] to [On] .
8) Open Men Menu [DDIC] [DD_Ctrl], then adjust [G Offset] to almost same measured luminance level.
9) Open Menu [DDIC] [Blanking], click [G] and set [BLACK] to **127**.
10) Open Menu [DDIC] , then set [STC] [DYN] to [Off].
11) Put the G color filter in front of the light-meter, then measure the screen center luminance.
12) Open Menu [DDIC] , then set [STC] [DYN] to [On].
13) Open Menu [DDIC] [Gain] , uncheck [☐ Only 1 Bar], adjust [Gain 1] to [Gain 8] to almost same measured luminance level.
14) Open Menu [DDIC] [DD_Ctrl], then return [R Offset] and [G Offset] to the values noted above.
15) In the same manner as G, adjust R and B.

(7) **After adjustment**

1) Open Menu [Shading] and click [Copy Shading Data to Reverse Shading Data] .
2) Open Menu [DDIC] [DD_Ctrl], and click [R Hide] , [G Hide] and [B Hide] , then set to [Off].
3) If required, open Menu [Shading] and adjust the [LUM] shading for optical shading.

(8) **Ceiling adjustment**

1) Do all adjustment on the ceiling mount condition, if required.

8-PHASE VERTICAL BARS adjustment

Instruments	**VGA Signal generator**	**REPLAING COMPONENTS** ● MAIN PWB ASS'Y ● VIDEO PWB ASS'Y ● OPTICAL BLOCK
Test point		
Adjustment menu	**<DDIC> <AV> <Gamma>**	
Preparation	**Set the FOCUS to optimum condition**	

(1) **PREPARATION**

1) Adjust the focus to get the best focus on the screen.
2) Open Menu [DDIC] [DD_Ctrl], and click [LUM], [GAM] and [DYN], then set them to [On], and set the [LUM] to [Off].
3) Open Menu [DDIC] [DD_Ctrl], and make a note of the [R Offset], [G Offset] and [B Offset].
4) Open Menu [DDIC] [DD_Ctrl], and click [R Hide], [G Hide] and [B Hide], then set to [On].
5) Set the [IPM0] and [IPM1] to [Off].
6) Open Menu [DDIC] [Blanking], click [G] and set [BLACK] to **70**.
7) Open Menu [DDIC] [DD_Ctrl], then adjust [G Offset] to the vertical lines most visible.
8) Open Menu [Gamma] [Green], adjust Offset 1 - 8 to become the vertical lines not to quietly.
   Note : For observation of the vertical line's correspondence, change the SETUP 1 value higher.

(2) **WHITE 8 BARS adjustment**

1) Open Menu [DDIC] [Blanking], click [G] and set [BLACK] to **200**.
2) Open Menu [DDIC] [DD_Ctrl], then adjust [Offset Voltage G] for observation of the vertical lines.
3) Open Menu [DDIC] [Gain], check Only 1 Bar, and then adjust [GIN] of the [Green #1] ~ [Green #8] to become the vertical lines not to quietly.
   Note : For adjustment of the vertical line's correspondence, change the #1 value lower.

(3) **R and B adjustment**

1) In the same manner as G, adjust R and B.

(4) **Data input and confirmation**

1) Open Menu [DDIC] [DD_Ctrl], then input the value to the [R Offset], [G Offset] and [B Offset] noted above steps.
2) Open Menu [DDIC] [DD_Ctrl], then set the [LUM] to [On].
3) Supply VGA gray scale signal, and confirm good condition for each signal level and whole screen.

PIXEL SHIFT adjustment

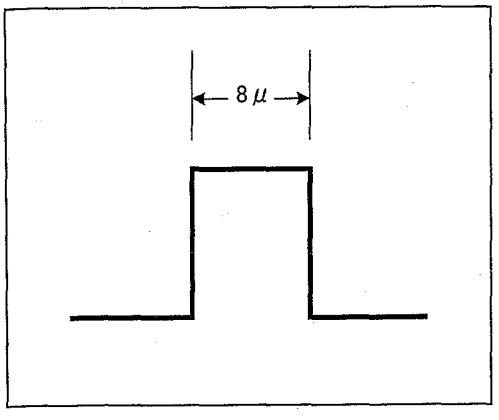
Instruments	**SXGA signal generator [Cross hatch]** **Remote control unit**	**REPLAING COMPONENTS** ● MAIN PWB ASS'Y ● OPTICAL BLOCK
Test point		
Adjustment menu	**<DDIC>**	
Preparation		

(1) Supply SXGA Cross hatch signal and project it on the screen.
(2) Set Right-Left reverse and Up-Down reverse to OFF.
(3) Open Menu [DDIC] [Pixel] and adjust [DDIC] [V SHIFT] and [DDIC] [PXLSHFT] to minimize the convergence error.

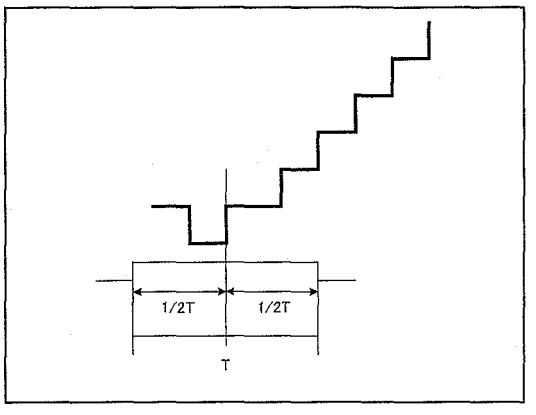
FLYBACK PULSE adjustment

Instruments	PAL signal generator [Gray scale] Oscilloscope	REPLAING COMPONENTS ● VIDEO PWB ASS'Y
Test point	AL2 connector 1-pin, 2-pin and 3-pin [MAIN PWB ASS'Y]	
Adjustment menu	<AV>	
Preparation		

(1) Supply a PAL gray scale signal and project it on the screen.
(2) Connect the oscilloscope to MAIN PWB ASS'Y AL2 connector 1-pin FBP IN (GND : 8-pin).
(3) Open Menu [AV] [HPOS W], adjust the pulse width as the waveform following below.
(4) Connect the oscilloscope to MAIN PWB ASS'Y AL2 connector 3-pin Y-IN and 2-pin NT/H_OUT (GND : 8-pin).
(5) Open Menu [AV] [HPOS T], adjust the pulse timing as the waveform following below.



HPOS W Pulse width

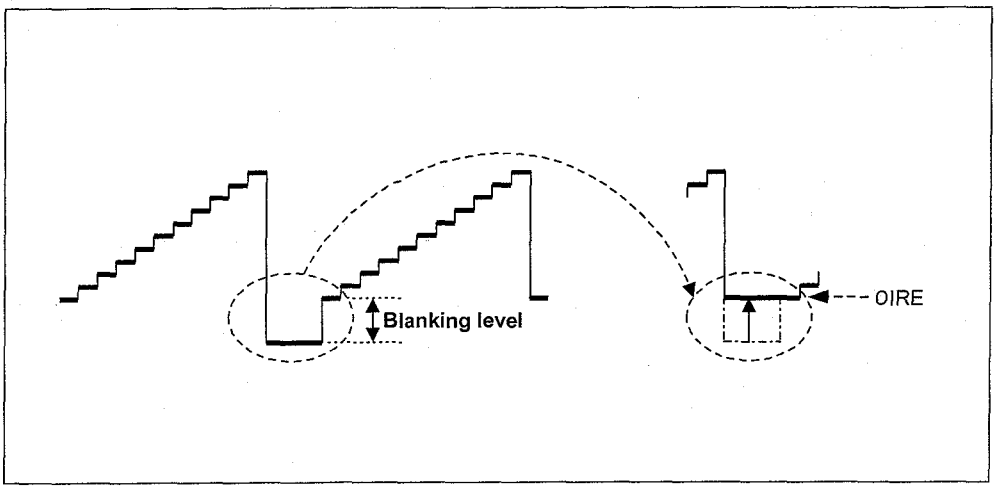


HPOS T Timing adjustment

PEDESTAL LEVEL adjustment

Instruments	PAL signal generator [Gray scale] Oscilloscope	REPLAING COMPONENTS ● VIDEO PWB ASS'Y
Test point	AL2 connector 4-pin [MAIN PWB ASS'Y]	
Adjustment menu	<AV>	
Preparation		

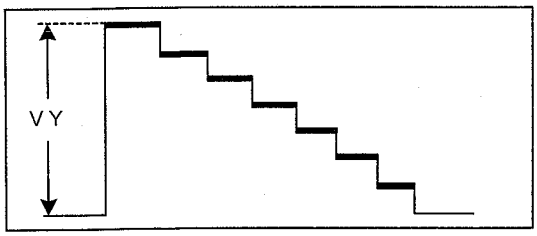
(1) Supply a PAL gray scale signal and project it on the screen.
(2) Open Menu [User adjustment] [Setup], and select the [S-VIDEO] or [COMPOSITE] in the [LINE].
(3) Connect the oscilloscope to MAIN PWB ASS'Y AL2 connector 4-pin M-Y (GND:3-pin).
(4) Open Menu [AV] [DECODE], adjust [DC T RATE] the blanking to become the same level as the blanking and 0 IRE (refer to figure given below).

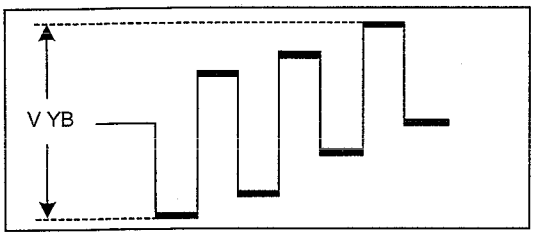


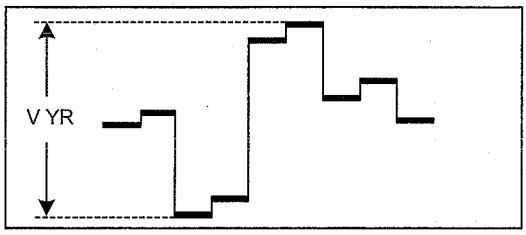
GAIN adjustment

Instruments	**PAL signal generator [Color bar]** **Oscilloscope**	**REPLAING COMPONENTS** **● VIDEO PWB ASS'Y**
Test point	**AL2 connector 4-pin, 6-pin and 7-pin [MAIN PWB ASS'Y]**	
Adjustment menu	**<AV>**	
Preparation		

(1) Supply a PAL color bar signal and project it on the screen.
(2) Connect the oscilloscope to MAIN PWB ASS'Y AL2 connector 4-pin M-Y, 6-pin M-BY and 7-pin M-RY (GND : 3-pin).
(3) Open Menu [AV] [EVR1].
(4) Observe the waveform with the oscilloscope and adjust [Y VOL], [YB VOL] and [YR VOL] to the value as the figure given below.







Adjustment item	Adjustment form	Test point	Setting voltage
Y VOL	V Y	AL2 4-pin	0.47V(p-p)±0.02V
YB VOL	V YB	AL2 6-pin	0.52V(p-p) ±0.02V
YR VOL	V YR	AL2 7-pin	0.38V(p-p) ±0.02V

PC PICTURE adjustment

Instruments	**SVGA signal generator [Gray scale] (0.7V(p-p))** **Oscillo-scope**	**REPLAING COMPONENTS** **● MAIN PWB ASS'Y**
Test point		
Adjustment menu	**<User Adjustment>**	
Preparation		

(1) Supply SVGA gray scale signal and project it on the screen.
(2) Open Menu [User Adjustment] [Ctrl], and click [All Quick Alignment].
(3) Display the dialogue that "Optimize gain and offset value in A/D converter, OK?" , then click [Yes].

DEVICE FRAME adjustment

Instruments	SVGA signal generator [Gray scale] Oscillo-scope	REPLAING COMPONENTS ● MAIN PWB ASS'Y ● OPTICAL BLOCK
Test point		
Adjustment menu	<User adjustment>	
Preparation		

(1) Supply SVGA gray scale signal and project it on the screen.
(2) Open Menu [DDIC] [DD_Ctrl].
(3) Adjust [R Frame], [G Frame] and [B Frame] to minimize the luminance in the device frame area (frame of the image).

SELF CHECK FUNCTION

ERROR LOG AND DISPLAY

OUTLINE

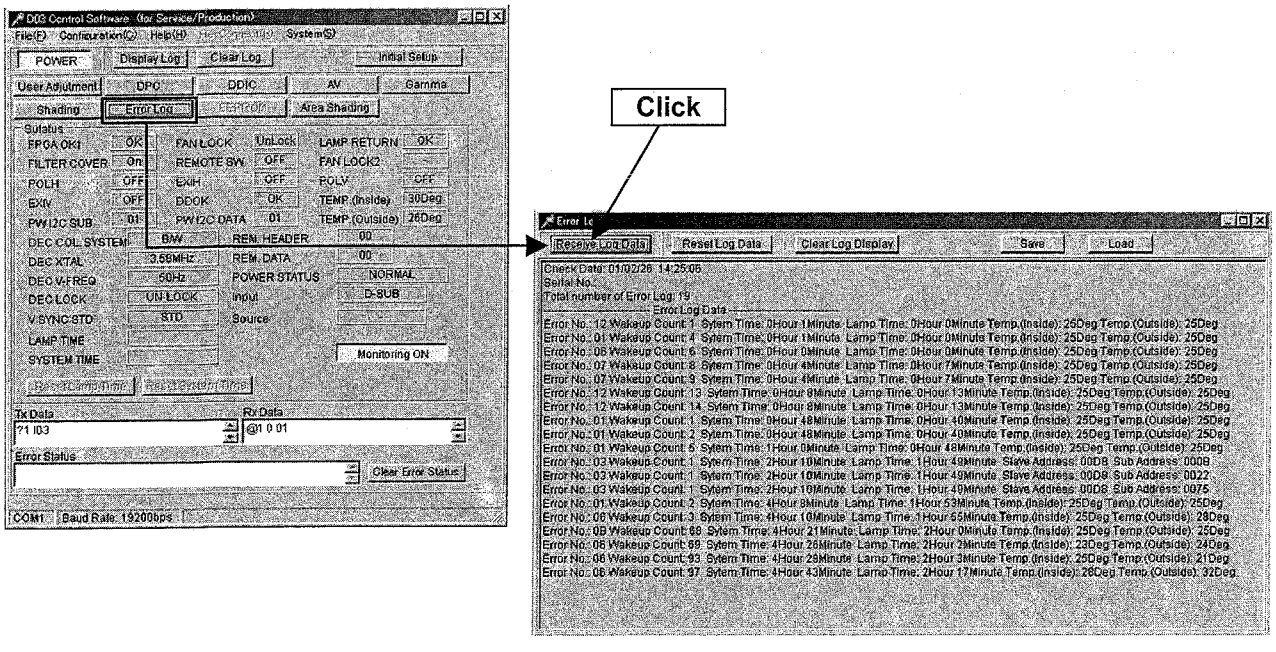
This PSV software can read the error detective log script which recorded at the illegal action. The contents are the based upon the "LED(indicators) warning message" and total usage hours, lamp warning, temperature of the inside or outside the unit.

HOW TO LOAD THE DATA FROM UNIT

1. Connect the RS-232C cable between this unit and the PC which has been installed the correct version adjustment software.
2. Set this unit to the stand-by condition.
3. Start up the adjustment software on the PC, then display the adjustment dialogue.
4. Click the [Error Log] button. Then display the error log dialogue.
5. Click the [Read] button, display the error history record.

ERROR LOG SCREEN ITEMS

ITEM	DISPLAYED CONTENTS
Error Detection	Error code during an error (13types)
Start-up times	The number of times the set has entered the operation mode
Set usage hours	Accumulated hours in the operation mode (standby mode) to the present
Lamp usage hours	Accumulated lighting hours of the lamp to the present
External temperature	Temperature detected by the external temperature sensor during an error
Internal temperature	Temperature detected by the internal temperature sensor during an error



■ERROR CODE

ERROR CODE	DETECT CONTENTS	FLUSH LED	ACTION MODE
E01	Lamp can not on when move the condition stand-by to next.	STAND BY + LAMP	STAND BY
E02	Lamp running time has exceeded guarantee time	LAMP	EMERGENCY
E03	Communication errors on the inter IC bus (ACK receive error)	Nothing	
E04	Detached the filter cover	STAND BY + OPERATE	EMERGENCY
E06	Lamp has been off during project	OPERATE + LAMP	STAND BY
E07	Stopped the Fan (Fan lock)	ALL	EMERGENCY
E08	Temperature in the unit is unusual (higher than 72°C).	TEMP	EMERGENCY
E09	Temperature out of the unit is unusual (higher than 55°C)	STAND BY + TEMP	EMERGENCY
E0B	Error occurred in the video signal circuit (decoder)	LAMP + TEMP (Alternate)	STAND BY
E0C	Initialize error in the video data	LAMP + TEMP (Alternate High)	STAND BY
E11	Error occurred in the sub-micom	LAMP + TEMP	STAND BY
E12	Error occurred in the circuit of the device driver	LAMP + TEMP (High)	STAND BY
E20	Change to the stand by mode by sleep timer function	STAND BY	STAND BY

■FUNCTIONS OF SCREEN

BUTTON (ITEM)	FUNCTION	DATA
Read out	Read out from unit and display into error log screen	Unit ⟶ PC
Delete	Delete all data in the unit (reset)	In the unit
Clear display	Delete the data error log record all (Data in the PC)	In the PC
Save as file	Save the data error log record as file	In the PC
Write to file	Read the data record file from PC and display on screen	In the PC

PARTS LIST

CAUTION

- The parts identified by the ⚠ symbol are important for the safety. Whenever replacing these parts, be sure to use specified ones to secure the safety .
- The parts not indicated in this Parts List and those which are filled with lines —— in the Parts No. columns will not be supplied.
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%

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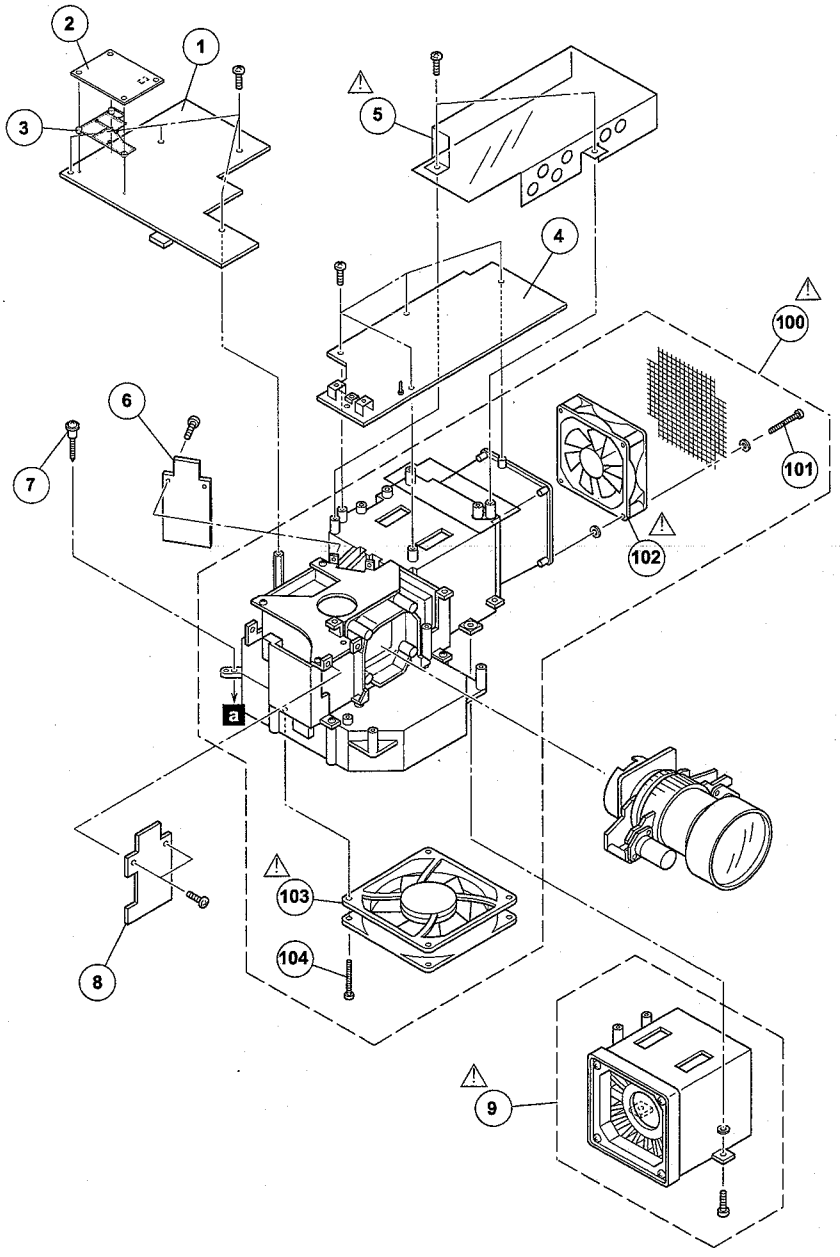
USING P.W. BOARD & REMOTE CONTROL UNIT

Model / P.W.B ASS'Y	DLA-M2000LU	DLA-M2000LE
ANALOG MODULE P.W.B	SXG-1101A	←
DPC MODULE P.W.B	SXG-1201A	←
DD MODULE P.W.B	SXG-1301A	←
B DRIVE MODULE P.W.B	SXG-3301A	←
RG DRIVE MODULE P.W.B	SXG-3401A	←
POWER P.W.B	SXG-9003A	←
LAMP POWER P.W.B	SXA-9107A	SXA-9108A
IGNITER P.W.B	SXA-9303A	←
MAIN LINE FILTER P.W.B	SXG-9505A	SXG-9506A
CONTROL&3.3V MODULE P.W.B	SXG-0P001A	←
REMOTE CONTROL UNIT	RM-M2000G	←

EXPLODED VIEW PART LIST (1)

⚠	Ref No.	Part No.	Part Name	Description
	1	SXG-1301A	DD MODULE PWB	
	2	QAL0258-001	OPERATION UNIT	
	3	LC31470-001B	OPE BUTT SPACER	
	4	----------	IGNITER PWB	SXA-9303A
⚠	5	LC20462-001A	COVER	
	6	SXA-3401A	RG DRIVE MODULE PWB	
	7	LC40194-001A	SPECIAL SCREW	×6
	8	SXG-3301A	B DRIVE MODULE PWB	
⚠	9	BHL5003	LAMP ASSY	
⚠	100	M2000L-OPSA	OPTICS ASSY	Inc.No.101~104
	101	QYSDSP4050M	SCREW	×4
⚠	102	QAR0147-001	FAN MOTOR 120	
⚠	103	QAR0042-003	FAN MOTOR 120	
	104	QYSDSP4035M	SCREW	×2

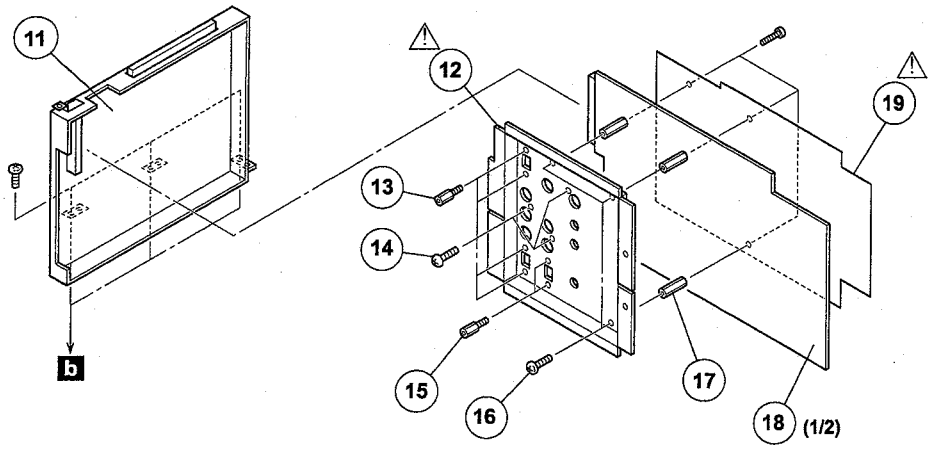
EXPLODED VIEW (1)

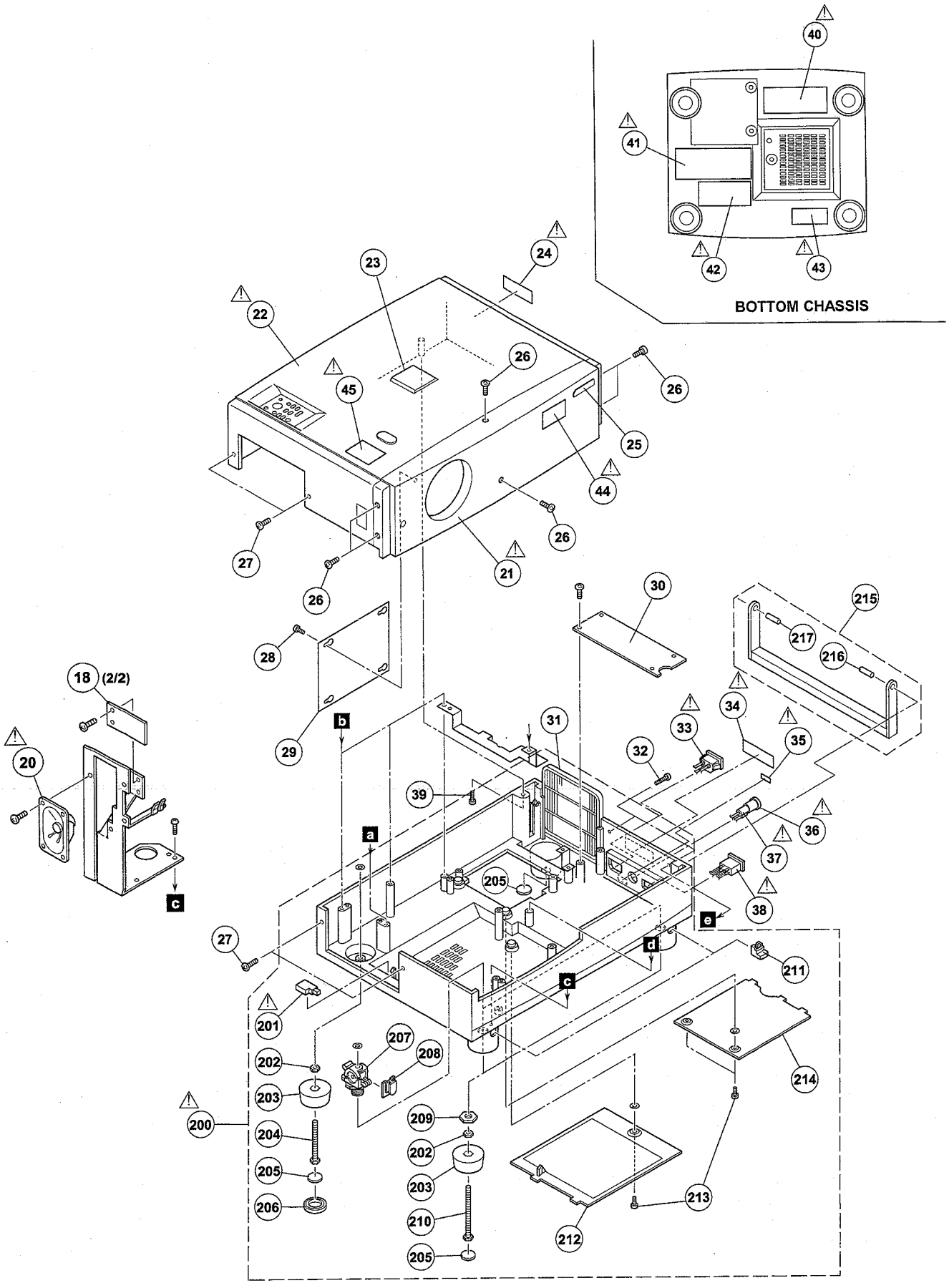


EXPLODED VIEW PARTS LIST (2)

	11	SXG-1201A	DPCMODULE PWB	
⚠	12	LC30220-005B	TERMINAL BOARD	
	13	QNB0037-001	RETAINER	×4
	14	QYSBSG3008M	TAPPING SCREW	×3
	15	QNB0081-001	NAT	×2
	16	QYSDSP3006M	SCREW	×3
	17	BHQ40073	SPACER(NUT)	×3
	18	SXG-1101A	ANALOG PWB	
⚠	19	LC31589-001A	SHIELD (ANALOG)	
⚠	20	QAS0011-001	SPEAKER	×1
⚠	21	LC20796-001B	FRONT COVER	
⚠	22	LC20797-001B	TOP COVER	
	23	LC30219-023B	NAME PLATE	
⚠	24	LC30502-007A	LABEL (O CAUTION)	
	25	PGD30011-1	JVC MARK	
	26	QYSDSP4010M	SCREW	×6
	27	QYSDSP3006M	SCREW	×4
	28	QYSBSFG3008Z	TAPPING SCREW	×4
	29	LC41049-001A	PLATE (F.COVER)	
	30	----------	MAIN FILTER PWB	SXG-9505A[DLA-M2000LU]
	30	----------	MAIN FILTER PWB	SXG-9506A[DLA-M2000LE]
	31	LC20498-002A	FAN COVER	
	32	QYSPSP3006Z	SCREW	×2
⚠	33	QMCB004-001	3P INLET	
⚠	34	LC30979-010A	RATING LABEL	[DLA-M2000LU]
⚠	34	LC30979-011A	RATING LABEL	[DLA-M2000LE]
⚠	35	LC40669-001A	FUSE LABEL	[DLA-M2000LU]
	35	LC40669-003A	FUSE LABEL	[DLA-M2000LE]
⚠	36	QNG0047-001	FUSE HOLDER	[DLA-M2000LU]
⚠	36	QNG0046-001	FUSE HOLDER	[DLA-M2000LE]
⚠	37	QMFZ041-150-J1	FUSE	15A[DLA-M2000LU]
⚠	37	QMF51D2-6R3J1	FUSE	6.3A[DLA-M2000LE]
⚠	38	QSW0699-002	SEESAW SWITCH	
	39	QYSBSG4016Z	TAP SCREW	×1
⚠	40	LC30329-011A	LABEL E(L CAUTION)	
⚠	41	LC30330-003C	LABEL E(L CAUTION)	
⚠	42	LC30331-003C	LABEL E(L CAUTION)	
⚠	43	LC30437-003C	FCC LABEL	[DLA-M2000LE ONLY]
⚠	44	LC31632-001A	CAUTION LABEL	
⚠	45	LC30332-007A	LABEL(L CAUTION)	
⚠	200	LC20463-003A	BOTTOM COVER	Inc.No.201~217
⚠	201	QSW0701-001	PUSH SWITCH	
	202	QYNTS8000R	NUT	×3
	203	LC30843-002A	FOOT F	×3
	204	LC40687-004A	BOLT FOOT	×1
	205	BHQ40041-3	FOOT (LOWER)	×4
	206	LC40219-001A	COVER 8 (FOOT NU	
	207	LC40676-001B	FOOT ARM ASSY	×2
	208	LC31020-002A	FOOT GUIDE	×2
	209	LC40654-001A	LOCK NUT	×2
	210	LC40687-003A	BOLT FOOT	×2
	211	LC31019-002A	FOOT BUTTON	×2
	212	LC30208-009A	COVER (B.FAN)	
	213	BHD0055	NUT	×3
	214	LC30207-018A	COVER LAMP ASSY	
	215	LC31085-002A	HANDLE ASSY	Inc.No.216,217
	216	LC40615-002A	SHAFT	
	217	LC40615-001A	SHAFT	

EXPLODED VIEW (2)

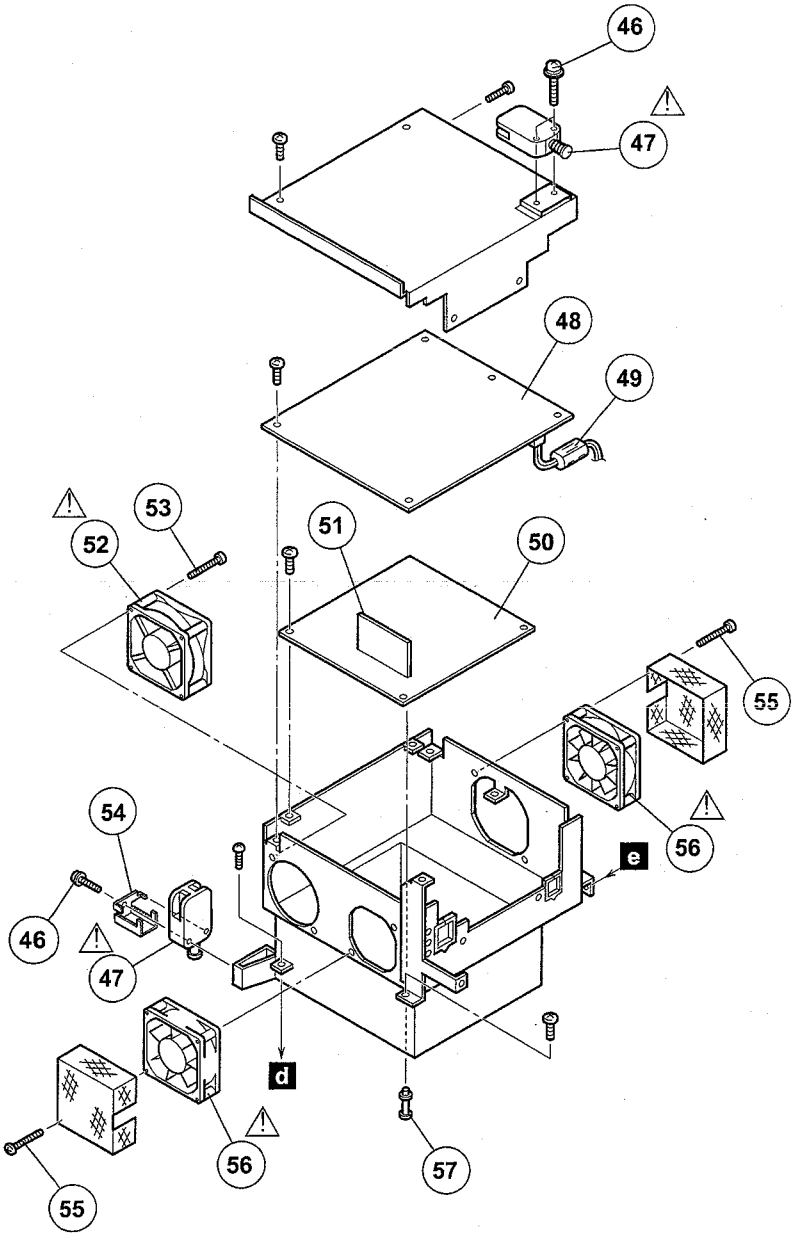



BOTTOM CHASSIS

EXPLODED VIEW PARTS LIST (3)

⚠	Ref.No.	Part No.	Part Name	Description
	46	QYSPSPD4020Z	SCREW	×3
⚠	47	QSW0700-002	PUSH SWITCH	×2
	48	----------	LAMP POWER PWB	SXA-9107A[DLA-M2000LU]
	48	----------	LAMP POWER PWB	SXA-9108A[DLA-M2000LE]
	49	QQR0491-001	FILTER	
	50	----------	POWER PWB	SXG-9003A
	51	SXG-0P001A	CONTROL&3.3V MODULE PWB	
⚠	52	QAR0044-001	FAN MOTOR 60	
	53	QYSPSPN3030Z	SCREW	×2
	54	LC31131-001A	SW GUARD	
	55	QYSPSPN3030Z	SCREW	×4
⚠	56	QAR0146-001	FAN MOTOR	×2
	57	LC40497-002A	SPACER	×4

EXPLODED VIEW (3)



PRINTED WIRING BOARD PARTS LIST

DLA-M2000LU

ANALOG MODULE P.W. BOARD ASS'Y (SXG-1101A)

The following PW boards are supplied as assemblies.
The component parts on the PC board are available only when the parts are listed in the "PRINTED CIRCUIT BOARD PARTS LIST".

⚠ Symbol No.	Part No.	Part Name	Description
OTHER			
J101	QMCC008-C01	DIN JACK	
J102	CEMB018-001	BNC CONNECTOR	
J601	QMS3005-C01	3.5 JACK	
J602	QNN0202-002	PIN JACK	
J701	QMS3005-C01	3.5 JACK	
J801	QNZ0082-001	D SUB CONNECTOR	

DPC P.W. BOARD ASS'Y (SXG-1201A)

The following PW boards are supplied as assemblies.
The component parts on the PC board are available only when the parts are listed in the "PRINTED CIRCUIT BOARD PARTS LIST".

⚠ Symbol No.	Part No.	Part Name	Description
OTHER			
J005	QNZ0102-001	D SUB CONNECTOR	
J101	QNZ0102-001	D SUB CONNECTOR	
J102	QNZ0154-001	BNC CONNECTOR	

POWER P.W. BOARD ASS'Y (SXG-9003A)

⚠ Symbol No.	Part No.	Part Name	Description
RESISTOR			
R9702	NRS144J-474X	MG R	470kΩ 1/2W J
R9703	NRS12BJ-2R2W	MG R	2.2 Ω 1/2W J
R9704	NRSA02J-103X	MG R	10kΩ 1/10W J
R9705	NRSA02J-820X	MG R	82Ω 1/10W J
R9706	NRSA02J-2R2X	MG R	2.2Ω 1/10W J
R9707	NRSA02J-103X	MG R	10kΩ 1/10W J
R9708	NRS12BJ-101W	MG R	100 Ω 1/2W J
R9709	NRS144J-474X	MG R	470kΩ 1/2W J
R9710	NRS12BJ-683W	MG R	68kΩ 1/2W J
R9715	NRS12BJ-1R0W	MG R	1.0 Ω 1/2W J
R9801	NRSA02J-103X	MG R	10kΩ 1/10W J
R9802	NRSA02J-102X	MG R	1kΩ 1/10W J
R9803	NRSA02J-471X	MG R	470Ω 1/10W J
R9804	NRSA02J-472X	MG R	4.7kΩ 1/10W J
R9805	NRSA02J-822X	MG R	8.2kΩ 1/10W J
R9806	NRSA02J-471X	MG R	470Ω 1/10W J
R9807	NRSA02J-102X	MG R	1kΩ 1/10W J
R9808-09	NRS12BJ-220W	MG R	22 Ω 1/2W J
R9810	NRSA02J-103X	MG R	10kΩ 1/10W J
R9811	NRS12BJ-220W	MG R	22 Ω 1/2W J
R9812	NRSA02J-103X	MG R	10kΩ 1/10W J
R9813	QRM059J-R47	MP R	0.47Ω 5W J
R9815	NRS144J-0R0X	MG R	0.0 Ω 1/4W J
R9816	NRSA02J-392X	MG R	3.9kΩ 1/10W J
R9817	NRSA02J-103X	MG R	10kΩ 1/10W J
R9823	NRSA02J-123X	MG R	12kΩ 1/10W J
R9824	NRSA02J-272X	MG R	2.7kΩ 1/10W J
R9827	NRS12BJ-560W	MG R	56 Ω 1/2W J
R9828-29	NRSA02J-222X	MG R	2.2kΩ 1/10W J
R9830	NRSA02J-684X	MG R	680kΩ 1/10W J
R9831	NRSA02J-223X	MG R	22kΩ 1/10W J
R9832	NRSA02F-332X	MG R	3.3kΩ 1/10W F
R9834	NRSA02F-2431X	MG R	2.43kΩ 1/10W F
R9845	NRSA02J-103X	MG R	10kΩ 1/10W J
R9849	NRSA02J-103X	MG R	10kΩ 1/10W J
R9850-51	NRSA02J-272X	MG R	2.7kΩ 1/10W J
R9852	QRE141J-104Y	C R	100kΩ 1/4W J
R9854	NRSA02J-822X	MG R	8.2kΩ 1/10W J
R9855	NRSA02J-150X	MG R	15Ω 1/10W J
R9866	NRSA02F-9101X	MG R	9.1kΩ 1/10W F
R9867	NRSA02J-561X	MG R	560Ω 1/10W J
R9868	NRSA02J-122X	MG R	1.2kΩ 1/10W J
R9869	NRSA02F-622X	MG R	6.2kΩ 1/10W F
R9870	NRSA02J-472X	MG R	4.7kΩ 1/10W J
R9871	NRSA02J-222X	MG R	2.2kΩ 1/10W J
R9872	NRSA02F-9101X	MG R	9.1kΩ 1/10W F
R9873	NRSA02J-561X	MG R	560Ω 1/10W J
R9874	NRSA02J-122X	MG R	1.2kΩ 1/10W J
R9875	NRSA02F-622X	MG R	6.2kΩ 1/10W F
R9876	NRSA02J-472X	MG R	4.7kΩ 1/10W J
R9877	NRSA02J-222X	MG R	2.2kΩ 1/10W J
R9903	NRSA02F-364X	MG R	360kΩ 1/10W F
R9904	NRSA02F-474X	MG R	470kΩ 1/10W F
R9905	NRSA02J-153X	MG R	15kΩ 1/10W J
R9906	NRSA02J-331X	MG R	330Ω 1/10W J
R9907	NRS016J-R22X	MG R	0.22Ω 1W J
R9909	NRSA02F-103X	MG R	10kΩ 1/10W F
R9910	NRSA02F-334X	MG R	330kΩ 1/10W F
R9911	NRSA02F-4753X	MG R	475kΩ 1/10W F
R9912	NRS12BJ-122W	MG R	1.2kΩ 1/2W J
R9913-14	NRSA02J-224X	MG R	220kΩ 1/10W J
R9915	NRS12BJ-223W	MG R	22kΩ 1/2W J
R9918	NRSA02F-334X	MG R	330kΩ 1/10W F
R9919	NRSA02F-3923X	MG R	392kΩ 1/10W F
R9920	NRSA02F-474X	MG R	470kΩ 1/10W F
R9924	NRSA02J-272X	MG R	2.7kΩ 1/10W J
R9925	NRSA02F-334X	MG R	330kΩ 1/10W F
R9926	NRSA02F-3923X	MG R	392kΩ 1/10W F
R9927	NRSA02F-334X	MG R	330kΩ 1/10W F
R9928	NRSA02F-4753X	MG R	475kΩ 1/10W F
CAPACITOR			
C9701	QEHR2GM-106Z	E CAP.	10μF 400V M
C9702	NCB21HK-272X	C CAP.	2700pF 50V K
C9703-04	QEHR1CM-107Z	E CAP.	100μF 16V M
C9705	QEHR1VM-107Z	E CAP.	100μF 35V M
C9706	QEHR1CM-107Z	E CAP.	100μF 16V M
⚠ C9710	QCZ9078-222	C CAP.	2200pFAC250V M
⚠ C9711	QCZ9078-222	C CAP.	2200pFAC250V M
C9712	CEX45624-222	CHIP C CAP.	2200pF 630V K
C9715	QEHR1CM-107Z	E CAP.	100μF 16V M
C9801	NCF21CZ-105X	C CAP.	1μF 16V Z
C9802	NDC21HJ-101X	C CAP.	100pF 50V J
C9803	NCB21HK-222X	C CAP.	2200pF 50V K
C9804	NCB21EK-104X	C CAP.	0.1μF 25V K
C9805	QEHR1EM-107Z	E CAP.	100μF 25V M
C9806-09	NCF11EZ-105X	C CAP.	1μF 25V Z
C9810-11	QEHR1HM-106Z	E CAP.	10μF 50V M
C9812-13	NCF11EZ-105X	C CAP.	1μF 25V Z
C9815	NCF11EZ-105X	C CAP.	1μF 25V Z
C9817	NCB21HK-103X	C CAP.	0.01μF 50V K
C9818	QCB31HK-102Z	C CAP.	1000pF 50V K
C9851-52	QEHR1VM-107Z	E CAP.	100μF 35V M
C9853	QTMT1CM-478	E CAP.	4700μF 16V M
C9854	QEHR1CM-107Z	E CAP.	100μF 16V M
C9855	QTMT1VM-567	E CAP.	560μF 35V M
C9856	QEHR1EM-227Z	E CAP.	220μF 25V M
C9857	QEHR1EM-477Z	E CAP.	470μF 25V M
C9858	QEHR1EM-107Z	E CAP.	100μF 25V M
C9860	QEHR1CM-477Z	E CAP.	470μF 16V M
C9864	NCB21HK-473X	C CAP.	0.047μF 50V K
C9869	QEHR1CM-107Z	E CAP.	100μF 16V M
⚠ C9873	QCZ9079-102	C CAP.	1000pFAC250V M
C9874-75	QEHR1EM-227Z	E CAP.	220μF 25V M

⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C9876-79	NCB21EK-104X	C CAP.	0.1µF 25V K
	C9880	QEHR1EM-107Z	E CAP.	100µF 25V M
⚠	C9901	QFZ9073-474	MPP CAP.	0.47µFAC275V M
⚠	C9903	QFZ9040-104	MF CAP.	0.1µF AC275V M
⚠	C9904	QCZ9078-102	C CAP.	1000pFAC250V M
⚠	C9905	QCZ9078-102	C CAP.	1000pFAC250V M
⚠	C9908	QCZ9078-222	C CAP.	2200pFAC250V M
⚠	C9909	QCZ9078-222	C CAP.	2200pFAC250V M
	C9910	QFZ0128-474	MPP CAP.	0.47µF 400V ±3%
	C9911	NCB21HK-103X	C CAP.	0.01µF 50V K
	C9912	NCB11EK-684X	C CAP.	0.68F 25V K
	C9913	NDC21HJ-102X	C CAP.	1000pF 50V J
⚠	C9914	CEX45695-001	E CAP.	200µF 450V M
	C9916-18	QEHR1VM-476Z	E CAP.	47µF 35V M
	C9919	NCF11EZ-105X	C CAP.	1µF 25V Z
	C9923	NCB21HK-103X	C CAP.	0.01µF 50V K
	TRANSFORMER			
⚠	T9701	QQS0086-002	SWITCH.TRANSF.	
⚠	T9801	QQR1158-001	DRIVE TRANSF.	
⚠	T9802	QQS0087-001	SWITCH.TRANSF.	
⚠	T9901	QQR1162-001	CHOKE COIL	
	COIL			
	L9701	QQL25CK-470Z	COIL	47µH K
	L9851	QQL25CK-470Z	COIL	47µH K
	L9852-53	QQLZ026-500	INDUCTOR	
	L9854	QQL26AK-470Z	COIL	47µH K
	L9855	QQL25CK-470Z	COIL	47µH K
	L9901	QQL26AK-561Z	CHOKE COIL	
	DIODE			
	D9701	S1WB/A/6O-X	DIODE	
	D9702	MA3068/M/-X	ZENER DIODE	
	D9703	M1FS6-X	SI.DIODE	
	D9704	MA111-X	SI.DIODE	
	D9705	M1FL20U-X	DIODE	
	D9706	M1FS6-X	SI.DIODE	
	D9707	RS1J-X	DIODE	
	D9801-03	MA111-X	SI.DIODE	
	D9804	MA3270/H/-X	ZENER DIODE	
	D9805	MA111-X	SI.DIODE	
	D9806	MA3270/H/-X	ZENER DIODE	
	D9807	M1FS6-X	SI.DIODE	
	D9808	MA3120/M/-X	ZENER DIODE	
	D9809-10	RS2J-X	DIODE	
	D9811-12	MA111-X	SI.DIODE	
	D9851	M1FS6-X	SI.DIODE	
	D9852	YG805C04R	SI.DIODE	
	D9853	YG811S06R	SI.DIODE	
	D9854	YG811S09R	SI.DIODE	
	D9855	M1FS6-X	SI.DIODE	
	D9856-57	MA111-X	SI.DIODE	
	D9860-62	MA111-X	SI.DIODE	
	D9868	MA111-X	SI.DIODE	
	D9869	1SS133-T2	SI.DIODE	
	D9870	MTZJ6.8A-T2	ZENER DIODE	
⚠	D9901	D15XB60H	SI.DIODE	
	D9902	D5L60	SI.DIODE	
	D9903-04	RS1J-X	DIODE	
	D9905	MA3110/M/-X	ZENER DIODE	
	D9908-10	MA111-X	SI.DIODE	
	TRANSISTOR			
	Q9701	2SC3751/KLM/	SI.TRANSISTOR	
	Q9702	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q9801	FMG9A-W	DIGI.TRANSISTOR	
	Q9802	FMC3A-W	DIGI.TRANSISTOR	
	Q9803	FP203-X	DIGI.TRANSISTOR	
	Q9804	FMC3A-W	DIGI.TRANSISTOR	
	Q9805-06	2SK1017-01	F.E.T.	
	Q9807	2SC2412K/QR/-X	SI.TRANSISTOR	

⚠	Symbol No.	Part No.	Part Name	Description
	TRANSISTOR			
	Q9817	DTC143XKA-X	DIGI.TRANSISTOR	
	Q9823	DTC143XKA-X	DIGI.TRANSISTOR	
	Q9824-25	2SK1228-X	F.E.T.	
	Q9826	2SA1309A/QR/-T	SI.TRANSISTOR	
	Q9901	2SK1017-01	F.E.T.	
	Q9902	2SD2114K/V/-X	SI.TRANSISTOR	
	IC			
	IC9701	TA78L12F-X	I.C.(MONO-ANA)	
	IC9801	FA13843N-X	I.C.(M)	
⚠	IC9802	TLP421F/D4-GR/X	I.C.(PH.COUPLER)	
⚠	IC9803	TLP421F/D4-GR/X	I.C.(PH.COUPLER)	
⚠	IC9804	TLP421F/D4-GR/X	I.C.(PH.COUPLER)	
	IC9805	NJM431U-XE	I.C.(MONO-ANA)	
	IC9810-11	PQ30RV11	I.C.(MONO-ANA)	
	IC9901	MC33262D-X	I.C.(MONO-ANA)	
	IC9902	MIP0221SU-X	I.C.(M)	
	OTHERS			
	CN9001	QGA2001C1-14	W TO B CONNE	
	CN9002	QGA2001C1-12	W TO B CONNE	
	CN9203	QGA2001C1-06	W TO B CONNE	
⚠	FR9701	CEX45472-001	FUSIBLE RESISTOR	
	K9701-03	NQR0006-009X	FERRITE BEADS	
	K9801-02	NQR0006-010X	FERRITE BEADS	
	K9851	NQR0351-003X	FERRITE BEADS	
	K9852	NQR0351-001X	FERRITE BEADS	
	K9853	NQR0351-003X	FERRITE BEADS	
	K9854-55	NQR0351-001X	FERRITE BEADS	
	K9901	NQR0006-010X	FERRITE BEADS	
⚠	LF9901	QQR0527-003	LINE FILTER	

LAMP POWER P.W. BOARD ASS'Y (SXA-9107A)

[DLA-M2000LU]

VARIABLE RESISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	R9227	QVP0053-102Z	V R	1kΩ
	R9306	QVP0053-103Z	V R	10kΩ
	R9323	QVP0053-103Z	V R	10kΩ

RESISTOR

	R9201	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9202	NRSA02J-222X	MG R	2.2kΩ 1/10W J
	R9203	NRSA02J-474X	MG R	470kΩ 1/10W J
	R9204	NRSA02J-333X	MG R	33kΩ 1/10W J
	R9205	NRSA02J-820X	MG R	82Ω 1/10W J
	R9206	NRSA02J-223X	MG R	22kΩ 1/10W J
	R9208	QRZ0213-153	OM R	15kΩ 3W J
	R9209	QRE121J-391Y	C R	390Ω 1/2W J
	R9210-11	NRS12BJ-224W	MG R	220kΩ 1/2W J
	R9212	QRM059J-R15	MP R	0.15Ω 5W J
	R9213	QRM059J-R12	MP R	0.12Ω 5W J
	R9214	NRSA02J-473X	MG R	47kΩ 1/10W J
	R9215	NRS12BJ-220W	MG R	22 Ω 1/2W J
	R9216	NRS12BJ-472W	MG R	4.7kΩ 1/2W J
	R9217	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9218	NRS12BJ-220W	MG R	22 Ω 1/2W J
	R9219	NRS12BJ-472W	MG R	4.7kΩ 1/2W J
	R9220	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9221	NRS12BJ-220W	MG R	22 Ω 1/2W J
	R9222	NRS12BJ-472W	MG R	4.7kΩ 1/2W J
	R9223	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9224-25	NRS12BJ-184W	MG R	180kΩ 1/2W J
	R9226	NRSA02J-122X	MG R	1.2kΩ 1/10W J
	R9228	NRS12BJ-274W	MG R	270kΩ 1/2W J
	R9229	NRS12BJ-224W	MG R	220kΩ 1/2W J
	R9230	NRSA02J-182X	MG R	1.8kΩ 1/10W J
	R9231	NRS12BJ-331W	MG R	330 Ω 1/2W J
	R9232	NRSA02J-471X	MG R	470Ω 1/10W J
	R9233	NRSA02J-472X	MG R	4.7kΩ 1/10W J
	R9234-36	NRS144J-4R7X	MG R	4.7 Ω 1/4W J
	R9237	NRSA02J-220X	MG R	22Ω 1/10W J
	R9301-02	QRG01GJ-473	OM R	47kΩ 1W J
	R9303	NRSA02J-272X	MG R	2.7kΩ 1/10W J
	R9304	NRSA02J-153X	MG R	15kΩ 1/10W J
	R9305	QRE121J-4R7Y	C R	4.7Ω 1/2W J
	R9307	NRSA02J-473X	MG R	47kΩ 1/10W J
	R9308	NRSA02J-272X	MG R	2.7kΩ 1/10W J
	R9311	NRSA02J-102X	MG R	1kΩ 1/10W J
	R9312	NRSA02J-154X	MG R	150kΩ 1/10W J
	R9313	NRSA02J-392X	MG R	3.9kΩ 1/10W J
	R9314	NRSA02J-152X	MG R	1.5kΩ 1/10W J
	R9315	NRSA02J-392X	MG R	3.9kΩ 1/10W J
	R9316-17	QRE121J-274Y	C R	270kΩ 1/2W J
	R9318	QRL029J-393	OM R	39kΩ 2W J
	R9319	NRSA02J-123X	MG R	12kΩ 1/10W J
	R9320-21	NRS12BJ-154W	MG R	150kΩ 1/2W J
	R9322	NRSA02J-0R0X	MG R	0.0Ω 1/10W J
	R9324	NRSA02J-471X	MG R	470Ω 1/10W J
	R9325	NRSA02J-223X	MG R	22kΩ 1/10W J
	R9326	NRSA02J-153X	MG R	15kΩ 1/10W J
	R9327	NRSA02J-332X	MG R	3.3kΩ 1/10W J
	R9328	NRS144J-154X	MG R	150kΩ 1/2W J
	R9329	NRS144J-184X	MG R	180kΩ 1/2W J
	R9330	NRSA02J-392X	MG R	3.9kΩ 1/10W J
	R9331	NRSA02J-0R0X	MG R	0.0Ω 1/10W J
	R9332	NRSA02J-104X	MG R	100kΩ 1/10W J
	R9333	NRSA02J-182X	MG R	1.8kΩ 1/10W J
	R9334	NRSA02J-272X	MG R	2.7kΩ 1/10W J
	R9335	NRSA02J-471X	MG R	470Ω 1/10W J
	R9337	NRSA02J-472X	MG R	4.7kΩ 1/10W J
	R9338-39	NRS12BJ-273W	MG R	27kΩ 1/2W J
	R9340	NRSA02J-682X	MG R	6.8kΩ 1/10W J
	R9341	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9342	NRSA02J-683X	MG R	68kΩ 1/10W J
	R9344	NRSA02J-472X	MG R	4.7kΩ 1/10W J
	R9345	NRSA02J-103X	MG R	10kΩ 1/10W J

RESISTOR

⚠	Symbol No.	Part No.	Part Name	Description
	R9346	NRSA02J-394X	MG R	390kΩ 1/10W J
	R9347	NRSA02J-222X	MG R	2.2kΩ 1/10W J
	R9348	NRSA02J-100X	MG R	10Ω 1/10W J
	R9401	NRS12BJ-220W	MG R	22 Ω 1/2W J
	R9402	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9403	QRE121J-220Y	C R	22Ω 1/2W J
	R9404	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9405	QRM059J-R12	MP R	0.12Ω 5W J
	R9406	QRM059J-R39	MP R	0.39Ω 5W J
	R9407	NRS12BJ-1R0W	MG R	1.0 Ω 1/2W J
	R9501	NRSA02J-561X	MG R	560Ω 1/10W J
	R9502-03	NRSA02J-272X	MG R	2.7kΩ 1/10W J
	R9504	NRSA02J-153X	MG R	15kΩ 1/10W J
	R9505	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9506	NRSA02J-274X	MG R	270kΩ 1/10W J
	R9507	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9508	NRSA02J-272X	MG R	2.7kΩ 1/10W J
	R9509	NRSA02J-102X	MG R	1kΩ 1/10W J
	R9510	NRSA02J-332X	MG R	3.3kΩ 1/10W J
	R9511	NRS12BJ-563W	MG R	56kΩ 1/2W J
	R9512	NRSA02J-104X	MG R	100kΩ 1/10W J
	R9513	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9514	NRSA02J-152X	MG R	1.5kΩ 1/10W J
	R9515-17	NRSA02J-102X	MG R	1kΩ 1/10W J
	R9518	NRSA02J-473X	MG R	47kΩ 1/10W J
	R9519	NRSA02J-561X	MG R	560Ω 1/10W J
	R9520	NRSA02J-102X	MG R	1kΩ 1/10W J
	R9521	NRSA02J-272X	MG R	2.7kΩ 1/10W J
	R9522	NRSA02J-473X	MG R	47kΩ 1/10W J
	R9523	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9524	NRSA02J-472X	MG R	4.7kΩ 1/10W J
	R9526	NRSA02J-472X	MG R	4.7kΩ 1/10W J
	R9527	NRSA02J-473X	MG R	47kΩ 1/10W J
	R9528-29	NRS12BJ-104W	MG R	100kΩ 1/2W J
	R9530	QRZ0212-2R7	UNF R	2.7 Ω 5W J
	R9531	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9532	NRSA02J-474X	MG R	470kΩ 1/10W J
	R9533	NRSA02J-222X	MG R	2.2kΩ 1/10W J
	R9534	NRSA02J-152X	MG R	1.5kΩ 1/10W J
	R9535	NRSA02J-393X	MG R	39kΩ 1/10W J
	R9536	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9537	NRSA02J-222X	MG R	2.2kΩ 1/10W J
	R9539	QRN141J-0R0Y	C R	0.0Ω 1/4W J
	R9540	NRSA02J-0R0X	MG R	0.0Ω 1/10W J
	R9542	NRSA02J-0R0X	MG R	0.0Ω 1/10W J
	R9543	NRSA02J-102X	MG R	1kΩ 1/10W J
	R9544	NRS144J-1R0X	MG R	1.0 Ω 1/4W J
	R9546	NRSA02J-473X	MG R	47kΩ 1/10W J
	R9547	NRSA02J-103X	MG R	10kΩ 1/10W J
	R9548	NRSA02J-152X	MG R	1.5kΩ 1/10W J
	R9549	NRSA02J-393X	MG R	39kΩ 1/10W J
	R9551	NRSA02J-153X	MG R	15kΩ 1/10W J
	R9552	NRSA02J-124X	MG R	120kΩ 1/10W J
	R9553	NRSA02J-273X	MG R	27kΩ 1/10W J
	R9554	NRSA02J-101X	MG R	100Ω 1/10W J
	R9555	NRSA02J-124X	MG R	120kΩ 1/10W J
	R9556	NRSA02J-333X	MG R	33kΩ 1/10W J
	R9602-05	QRZ0205-R01	MP R	0.01 Ω 5W K

CAPACITOR

⚠	Symbol No.	Part No.	Part Name	Description
⚠	C9101	QFZ9036-104	MF CAP.	0.1μF AC250V M
⚠	C9102	QCZ9078-222	C CAP.	2200pFAC250V M
⚠	C9103	QCZ9078-222	C CAP.	2200pFAC250V M
⚠	C9104	QCZ9078-472	C CAP.	4700pFAC250V M
⚠	C9105	QFZ9075-155	MPP CAP.	1.5μFAC275V M
⚠	C9106	QCZ9078-222	C CAP.	2200pFAC250V M
⚠	C9107	QCZ9078-222	C CAP.	2200pFAC250V M
	C9201	NDC21HJ-471X	C CAP.	470pF 50V J
	C9202	NDC21HJ-680X	C CAP.	68pF 50V J
	C9203	NCB21EK-154X	C CAP.	0.15μF 25V K
	C9204	QEHR1VM-477Z	E CAP.	470μF 35V M

⚠	Symbol No.	Part No.	Part Name	Description
	CAPACITOR			
	C9205	NCF21HZ-334X	C CAP.	0.33µF 50V Z
	C9206	NCB21HK-331X	C CAP.	330pF 50V K
	C9207-08	QEHR1HM-226Z	E CAP.	22µF 50V M
	C9209	QEHR1HM-107Z	E CAP.	100µF 50V M
	C9210	QEHR1HM-226Z	E CAP.	22µF 50V M
⚠	C9211	QFZ0128-474	MPP CAP.	0.47µF 400V ±3%
⚠	C9212	QEZ0498-567	E CAP.	560µF 450V M
	C9213	NDC21HJ-152X	C CAP.	1500pF 50V J
	C9214	NDC21HJ-271X	C CAP.	270pF 50V J
	C9215	NCB21HK-103X	C CAP.	0.01µF 50V K
	C9216	NDC21HJ-390X	C CAP.	39pF 50V J
	C9218	NDC21HJ-680X	C CAP.	68pF 50V J
	C9220	NCB21EK-104X	C CAP.	0.1µF 25V K
	C9301-02	NCF11EZ-105X	C CAP.	1µF 25V Z
	C9303	QEHR1VM-227Z	E CAP.	220µF 35V M
	C9304	NCB21EK-104X	C CAP.	0.1µF 25V K
	C9305	NCS21EJ-472X	C CAP.	4200pF 25V J
	C9306	NCB21HK-103X	C CAP.	0.01µF 50V K
	C9307	NDC21HJ-101X	C CAP.	100pF 50V J
	C9308	NDC21HJ-561X	C CAP.	560pF 50V J
	C9309	QEHR1HM-106Z	E CAP.	10µF 50V M
	C9311	NDC21HJ-471X	C CAP.	470pF 50V J
	C9401-02	NCF11EZ-105X	C CAP.	1µF 25V Z
	C9403	QEHR1HM-106Z	E CAP.	10µF 50V M
⚠	C9404	QCZ9079-222	C CAP.	2200pFAC250V M
	C9501	QEHR1CM-227Z	E CAP.	220µF 16V M
	C9502	QEHR1HM-106Z	E CAP.	10µF 50V M
	C9503	QEHR1HM-105Z	E CAP.	1µF 50V M
	C9504	NCB21HK-102X	C CAP.	1000pF 50V K
	C9505	QTNC1HM-105Z	E CAP.	1.0µF 50V M
	C9506	QEHR1CM-107Z	E CAP.	100µF 16V M
	C9507-08	NCB21EK-104X	C CAP.	0.1µF 25V K
	C9509	QEHR1CM-227Z	E CAP.	220µF 16V M
	C9510	NCB21HK-102X	C CAP.	1000pF 50V K
	C9511	QCB32HK-561Z	C CAP.	560pF 500V K
	C9512	QEHR1HM-226Z	E CAP.	22µF 50V M
	C9513	QCB32HK-222Z	C CAP.	2200pF 500V K
	C9514	NCB21HK-103X	C CAP.	0.01µF 50V K
	C9515	NCB21HK-102X	C CAP.	1000pF 50V K
	C9516	QFKB2EJ-334	MM CAP.	0.33µF 250V J
	C9517	NCZ1024-102X	C CAP.	1000pF 250V K
	C9518	NCB21HK-103X	C CAP.	0.01µF 50V K
	C9519	NDC21HJ-121X	C CAP.	120pF 50V J
	C9521	QCB32HK-222Z	C CAP.	2200pF 500V K
	C9602	QEZ0440-476	E CAP.	47µF 160V M
	C9603	QCB32HK-102Z	C CAP.	1000pF 500V K
	TRANSFORMER			
⚠	T9201	QQR1064-001	TRANSF.	
⚠	T9301	QQR0812-001	DRIVE TRANSF.	
⚠	T9401	QQS0059-001	SWITCH.TRANSF.	
	COIL			
⚠	L9601	QQR1042-001	CHOKE COIL	
	DIODE			
⚠	D9101	D15XB60	SI.DIODE	
	D9201	MA3270/H/-X	ZENER DIODE	
	D9202	D1FS6-X	SI.DIODE	
	D9203	D1FS4-X	SI.DIODE	
	D9204	RD18E/B3/-T2	ZENER DIODE	
	D9205	EU2A-T3	SI.DIODE	
	D9206-08	D1FS4-X	SI.DIODE	
	D9209	YG912S6	SI.DIODE	
	D9210	MA3051-X	ZENER DIODE	
	D9211	MA3110/M/-X	ZENER DIODE	
	D9212	MA3056/H/-X	ZENER DIODE	
	D9213	MA111-X	SI.DIODE	
	D9301	D1FS4-X	SI.DIODE	
	D9302	MA3120/M/-X	ZENER DIODE	
	D9303-06	MA111-X	SI.DIODE	
	D9307	MA3150/M/-X	ZENER DIODE	

⚠	Symbol No.	Part No.	Part Name	Description
	DIODE			
	D9308	MA3270/H/-X	ZENER DIODE	
	D9309-11	MA111-X	SI.DIODE	
	D9401	D1FS4-X	SI.DIODE	
	D9402	PTZ27A-X	ZENER DIODE	
	D9403	D5L60	SI.DIODE	
	D9404	D1FS4-X	SI.DIODE	
	D9405	PTZ27A-X	ZENER DIODE	
	D9406	D5L60-F1	SI.DIODE	
	D9407	D1FS6-X	SI.DIODE	
	D9501	D1FL20U-X	SI.DIODE	
	D9502	MA111-X	SI.DIODE	
	D9503	SFOR1A42-T	THYRISTOR	
	D9504	MA3051/M/-X	ZENER DIODE	
	D9505	D1FS6-X	SI.DIODE	
	D9506	D5L60	SI.DIODE	
	D9507	MTZJ12C-T2	ZENER DIODE	
	D9508	MA111-X	SI.DIODE	
	D9509	MA3180/M/-X	ZENER DIODE	
	D9510	MA3150/M/-X	ZENER DIODE	
	D9511	MA111-X	SI.DIODE	
	D9512	MA3082/M/-X	ZENER DIODE	
	D9513	MTZJ12C-T2	ZENER DIODE	
	D9514	MA3062/M/-X	ZENER DIODE	
	D9515	MA3056/H/-X	ZENER DIODE	
	D9516-17	MA111-X	SI.DIODE	
	D9518-19	1SS376-X	SI.DIODE	
	D9520	MA111-X	SI.DIODE	
	D9521-22	MA3180/M/-X	ZENER DIODE	
	D9523	MA111-X	SI.DIODE	
	D9601	FML-33S-F1	SI.DIODE	
	D9602-03	D20LC20U	SI.DIODE	
	TRANSISTOR			
	Q9201	2SC4668-W	SI.TRANSISTOR	
	Q9203	2SA1795-W	SI.TRANSISTOR	
	Q9204	2SK2196	F.E.T.	
	Q9205	2SA1795-W	SI.TRANSISTOR	
	Q9206	2SK2196	F.E.T.	
	Q9207	2SA1795-W	SI.TRANSISTOR	
	Q9208	2SK2196	F.E.T.	
	Q9209	2SC4668-W	SI.TRANSISTOR	
	Q9210	2SA1795-W	SI.TRANSISTOR	
	Q9301	DTC143XKA-X	DIGI.TRANSISTOR	
	Q9302-03	DTC114EKA-X	DIGI.TRANSISTOR	
	Q9304	2SA1162/YG/-X	SI.TRANSISTOR	
	Q9305	2SC4668-W	SI.TRANSISTOR	
	Q9306	2SA1795-W	SI.TRANSISTOR	
	Q9309	2SC3751/KLM/	SI.TRANSISTOR	
	Q9310	2SK1228-X	F.E.T.	
	Q9311-12	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q9401-02	2SK1017-01	F.E.T.	
	Q9501	DTC123YKA-X	DIGI.TRANSISTOR	
	Q9502	DTC124EKA-X	DIGI.TRANSISTOR	
	Q9503-04	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q9505	2SD2114K/V/-X	SI.TRANSISTOR	
	Q9506	DTC114EKA-X	DIGI.TRANSISTOR	
	Q9507	DTC143XKA-X	DIGI.TRANSISTOR	
	Q9508	2SC4061K/NP/-X	SI.TRANSISTOR	
	Q9509	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q9510	IRF9630	F.E.T.	
	Q9511	DTC143XKA-X	DIGI.TRANSISTOR	
	Q9512	2SC2412K/QR/-X	SI.TRANSISTOR	
	IC			
	IC9201	FA5332M-X	I.C.(MONO-ANA)	
	IC9301	UC3843BD1-X	I.C.(MONO-ANA)	
⚠	IC9302	TLP721F(GR)	I.C.(PH.COUPLER)	
⚠	IC9303	TLP721F(GR)	I.C.(PH.COUPLER)	
	IC9304	TL072CD-X	I.C.(MONO-ANA)	
	IC9501	UPC358G-W	I.C.(MONO-ANA)	
	IC9502	NJM431U-XE	I.C.(MONO-ANA)	
	IC9503	UPC358G-W	I.C.(MONO-ANA)	
	IC9504	NJM431U-XE	I.C.(MONO-ANA)	

OTHERS

	QQR0867-001	FERRITE CORE	(×2)
CN9010	QGA7901C1-02	VH POST HEADER	
CN90PI	QNZ0127-001	A/V TERMINAL	
CN90PO	QNZ0127-001	A/V TERMINAL	
CN90VH	CE41507-001P	LV CONNECTOR	
⚠ LF9101	QQR0810-001	LINE FILTER	

IGNITER P.W. BOARD ASS'Y (SXA-9303A)

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
	R9101	QRG01GJ-102	OM R	1kΩ 1W J
	R9102	QRL039J-392	OM R	3.9kΩ 3W J
	R9604	QRZ9050-5R1	F R	5.1 Ω 5W J
	CAPACITOR			
	C9101	QFKB2EJ-334	MM CAP.	0.33µF 250V J
	C9102	QCZ0335-681	C CAP.	680pF 10kV M
	C9103-07	QCZ0335-202	C CAP.	2000pF 10kV M
	C9110-11	QCB32HK-222Z	C CAP.	2200pF 500V K
	C9112	QCB32HK-471Z	C CAP.	470pF 500V K
	C9603	QEZ0435-477	E CAP.	470µF 180V M
	C9604	QFZ0119-105	MPP CAP.	1.0µF 200V ±3%
	C9605	QEZ0471-226Z	E CAP.	22µF 160V M
	TRANSFORMER			
⚠	T9101	QQR0819-002	PULSE TRANS	
⚠	T9102	QQR1041-001	TRANSF.	
	DIODE			
	D9101	K1V14-F1P15	THYRISTOR	
	D9102-03	ESJC13-12BX	SI.DIODE	
	D9605-06	FML-32S-F1	SI.DIODE	
	OTHERS			
	CN90MI	QNZ0127-001	A/V TERMINAL	
	CN90PI	QNZ0127-001	A/V TERMINAL	
	CN90VH	CE41507-001P	LV CONNECTOR	
⚠	RY9601	QSK0104-001	RELAY	
	SG9101	SSG3X-1	ARRESTER	
	SG9102	SSG5X-1	ARRESTER	

MAIN LINE FILTER P.W. BOARD ASS'Y(SXG-9505A)

[DLA-M2000LU]

⚠	Symbol No.	Part No.	Part Name	Description
	RESISTOR			
⚠	R9901	QRZ0111-474	C R	470kΩ 1/2W K
⚠	R9902	QRZ0057-825	C R	8.2MΩ 1W J
⚠	R9903	QRZ0121-1R0	UNF R	1.0 Ω 5W J
⚠	R9910	QRZ9050-1R2	F R	1.2 Ω 5W J
	R9911-12	NRSA02J-103X	MG R	10kΩ 1/10W J
	CAPACITOR			
⚠	C9901	QFZ9075-225	MPP CAP.	2.2µFAC275V M
⚠	C9903	QFZ9036-104	MF CAP.	0.1µF AC250V M
⚠	C9904	QCZ9078-222	C CAP.	2200pFAC250V M
⚠	C9905	QCZ9078-222	C CAP.	2200pFAC250V M
⚠	C9906	QCZ9079-472	C CAP.	4700pFAC250V M
⚠	C9907	QFZ9036-104	MF CAP.	0.1µF AC250V M
⚠	C9909	QFZ9036-104	MF CAP.	0.1µF AC250V M
⚠	C9910	QFZ9075-105	MPP CAP.	1.0µFAC275V M
	C9911-12	QEHR1VM-476Z	E CAP.	47µF 35V M
	DIODE			
	D9910	MA111-X	SI.DIODE	
	TRANSISTOR			
	Q9910	2SC2412K/QR/-X	SI.TRANSISTOR	
	OTHERS			
⚠	LF9901	QQR1073-001	LINE FILTER	
⚠	LF9902	QQR1073-001	LINE FILTER	
⚠	RY9910	QSK0055-001	RELAY	
⚠	VA9901	ERZV10V621CS	VARISTOR	

PRINTED WIRING BOARD PARTS LIST

DLA-M2000LE

ANALOG MODULE P.W. BOARD ASS'Y (SXG-1101A)

The following PW boards are supplied as assemblies.
The component parts on the PC board are available only when the parts are listed in the "PRINTED CIRCUIT BOARD PARTS LIST".

⚠ Symbol No.	Part No.	Part Name	Description
OTHER			
J101	QMCC008-C01	DIN JACK	
J102	CEMB018-001	BNC CONNECTOR	
J601	QMS3005-C01	3.5 JACK	
J602	QNN0202-002	PIN JACK	
J701	QMS3005-C01	3.5 JACK	
J801	QNZ0082-001	D SUB CONNECTOR	

DPC P.W. BOARD ASS'Y (SXG-1201A)

The following PW boards are supplied as assemblies.
The component parts on the PC board are available only when the parts are listed in the "PRINTED CIRCUIT BOARD PARTS LIST".

⚠ Symbol No.	Part No.	Part Name	Description
OTHER			
J005	QNZ0102-001	D SUB CONNECTOR	
J101	QNZ0102-001	D SUB CONNECTOR	
J102	QNZ0154-001	BNC CONNECTOR	

POWER P.W. BOARD ASS'Y (SXG-9003A)

Refer to PARTS LIST in page 37 for this P.W. board.

LAMP POWER P.W. BOARD ASS'Y (SXA-9108A)

[DLA-M2000LE]

⚠ Symbol No.	Part No.	Part Name	Description
VARIABLE RESISTOR			
R9227	QVP0053-102Z	V R	1kΩ
R9306	QVP0053-103Z	V R	10kΩ
R9323	QVP0053-103Z	V R	10kΩ
RESISTOR			
R9201	NRSA02J-103X	MG R	10kΩ 1/10W J
R9202	NRSA02J-222X	MG R	2.2kΩ 1/10W J
R9203	NRSA02J-474X	MG R	470kΩ 1/10W J
R9204	NRSA02J-333X	MG R	33kΩ 1/10W J
R9205	NRSA02J-820X	MG R	82Ω 1/10W J
R9206	NRSA02J-223X	MG R	22kΩ 1/10W J
R9208	QRZ0213-153	OM R	15kΩ 3W J
R9209	QRE121J-391Y	C R	390Ω 1/2W J
R9210-11	NRS12BJ-224W	MG R	220kΩ 1/2W J
R9212	QRM059J-R15	MP R	0.15Ω 5W J
R9214	NRSA02J-473X	MG R	47kΩ 1/10W J
R9215	NRS12BJ-220W	MG R	22 Ω 1/2W J
R9216	NRS12BJ-472W	MG R	4.7kΩ 1/2W J
R9217	NRSA02J-103X	MG R	10kΩ 1/10W J
R9218	NRS12BJ-220W	MG R	22 Ω 1/2W J
R9219	NRS12BJ-472W	MG R	4.7kΩ 1/2W J
R9220	NRSA02J-103X	MG R	10kΩ 1/10W J
R9221	NRS12BJ-220W	MG R	22 Ω 1/2W J
R9222	NRS12BJ-472W	MG R	4.7kΩ 1/2W J

⚠ Symbol No.	Part No.	Part Name	Description
RESISTOR			
R9223	NRSA02J-103X	MG R	10kΩ 1/10W J
R9224-25	NRS12BJ-184W	MG R	180kΩ 1/2W J
R9226	NRSA02J-122X	MG R	1.2kΩ 1/10W J
R9228	NRS12BJ-274W	MG R	270kΩ 1/2W J
R9229	NRS12BJ-224W	MG R	220kΩ 1/2W J
R9230	NRSA02J-182X	MG R	1.8kΩ 1/10W J
R9231	NRS12BJ-331W	MG R	330 Ω 1/2W J
R9232	NRSA02J-471X	MG R	470Ω 1/10W J
R9233	NRSA02J-472X	MG R	4.7kΩ 1/10W J
R9234-36	NRS144J-4R7X	MG R	4.7 Ω 1/4W J
R9237	NRSA02J-220X	MG R	22Ω 1/10W J
R9301-02	QRG01GJ-473	OM R	47kΩ 1W J
R9303	NRSA02J-272X	MG R	2.7kΩ 1/10W J
R9304	NRSA02J-153X	MG R	15kΩ 1/10W J
R9305	QRE121J-4R7Y	C R	4.7Ω 1/2W J
R9307	NRSA02J-473X	MG R	47kΩ 1/10W J
R9308	NRSA02J-272X	MG R	2.7kΩ 1/10W J
R9311	NRSA02J-102X	MG R	1kΩ 1/10W J
R9312	NRSA02J-154X	MG R	150kΩ 1/10W J
R9313	NRSA02J-392X	MG R	3.9kΩ 1/10W J
R9314	NRSA02J-152X	MG R	1.5kΩ 1/10W J
R9315	NRSA02J-392X	MG R	3.9kΩ 1/10W J
R9316-17	QRE121J-274Y	C R	270kΩ 1/2W J
R9318	QRL029J-393	OM R	39kΩ 2W J
R9319	NRSA02J-123X	MG R	12kΩ 1/10W J
R9320-21	NRS12BJ-154W	MG R	150kΩ 1/2W J
R9322	NRSA02J-0R0X	MG R	0.0Ω 1/10W J
R9324	NRSA02J-471X	MG R	470Ω 1/10W J
R9325	NRSA02J-223X	MG R	22kΩ 1/10W J
R9326	NRSA02J-153X	MG R	15kΩ 1/10W J
R9327	NRSA02J-332X	MG R	3.3kΩ 1/10W J
R9328	NRS144J-154X	MG R	150kΩ 1/2W J
R9329	NRS144J-184X	MG R	180kΩ 1/2W J
R9330	NRSA02J-392X	MG R	3.9kΩ 1/10W J
R9331	NRSA02J-0R0X	MG R	0.0Ω 1/10W J
R9332	NRSA02J-104X	MG R	100kΩ 1/10W J
R9333	NRSA02J-182X	MG R	1.8kΩ 1/10W J
R9334	NRSA02J-272X	MG R	2.7kΩ 1/10W J
R9335	NRSA02J-471X	MG R	470Ω 1/10W J
R9337	NRSA02J-472X	MG R	4.7kΩ 1/10W J
R9338-39	NRS12BJ-273W	MG R	27kΩ 1/2W J
R9340	NRSA02J-682X	MG R	6.8kΩ 1/10W J
R9341	NRSA02J-103X	MG R	10kΩ 1/10W J
R9342	NRSA02J-683X	MG R	68kΩ 1/10W J
R9344	NRSA02J-472X	MG R	4.7kΩ 1/10W J
R9345	NRSA02J-103X	MG R	10kΩ 1/10W J
R9346	NRSA02J-394X	MG R	390kΩ 1/10W J
R9347	NRSA02J-222X	MG R	2.2kΩ 1/10W J
R9348	NRSA02J-100X	MG R	10Ω 1/10W J
R9401	NRS12BJ-220W	MG R	22 Ω 1/2W J
R9402	NRSA02J-103X	MG R	10kΩ 1/10W J
R9403	QRE121J-220Y	C R	22Ω 1/2W J
R9404	NRSA02J-103X	MG R	10kΩ 1/10W J
R9405	QRM059J-R12	MP R	0.12Ω 5W J
R9406	QRM059J-R39	MP R	0.39Ω 5W J
R9407	NRS12BJ-1R0W	MG R	1.0 Ω 1/2W J
R9501	NRSA02J-561X	MG R	560Ω 1/10W J
R9502-03	NRSA02J-272X	MG R	2.7kΩ 1/10W J
R9504	NRSA02J-153X	MG R	15kΩ 1/10W J
R9505	NRSA02J-103X	MG R	10kΩ 1/10W J
R9506	NRSA02J-274X	MG R	270kΩ 1/10W J
R9507	NRSA02J-103X	MG R	10kΩ 1/10W J
R9508	NRSA02J-272X	MG R	2.7kΩ 1/10W J
R9509	NRSA02J-102X	MG R	1kΩ 1/10W J
R9510	NRSA02J-332X	MG R	3.3kΩ 1/10W J
R9511	NRS12BJ-563W	MG R	56kΩ 1/2W J
R9512	NRSA02J-104X	MG R	100kΩ 1/10W J
R9513	NRSA02J-103X	MG R	10kΩ 1/10W J
R9514	NRSA02J-152X	MG R	1.5kΩ 1/10W J

⚠	Symbol No.	Part No.	Part Name	Description	
RESISTOR					
	R9515-17	NRSA02J-102X	MG R	1kΩ 1/10W	J
	R9518	NRSA02J-473X	MG R	47kΩ 1/10W	J
	R9519	NRSA02J-561X	MG R	560Ω 1/10W	J
	R9520	NRSA02J-102X	MG R	1kΩ 1/10W	J
	R9521	NRSA02J-272X	MG R	2.7kΩ 1/10W	J
	R9522	NRSA02J-473X	MG R	47kΩ 1/10W	J
	R9523	NRSA02J-103X	MG R	10kΩ 1/10W	J
	R9524	NRSA02J-472X	MG R	4.7kΩ 1/10W	J
	R9526	NRSA02J-472X	MG R	4.7kΩ 1/10W	J
	R9527	NRSA02J-473X	MG R	47kΩ 1/10W	J
	R9528-29	NRS12BJ-104W	MG R	100kΩ 1/2W	J
	R9530	QRZ0212-2R7	UNF R	2.7 Ω 5W	J
	R9531	NRSA02J-103X	MG R	10kΩ 1/10W	J
	R9532	NRSA02J-474X	MG R	470kΩ 1/10W	J
	R9533	NRSA02J-222X	MG R	2.2kΩ 1/10W	J
	R9534	NRSA02J-152X	MG R	1.5kΩ 1/10W	J
	R9535	NRSA02J-393X	MG R	39kΩ 1/10W	J
	R9536	NRSA02J-103X	MG R	10kΩ 1/10W	J
	R9537	NRSA02J-222X	MG R	2.2kΩ 1/10W	J
	R9539	QRN141J-0R0Y	C R	0.0Ω 1/4W	J
	R9540	NRSA02J-0R0X	MG R	0.0Ω 1/10W	J
	R9542	NRSA02J-0R0X	MG R	0.0Ω 1/10W	J
	R9543	NRSA02J-102X	MG R	1kΩ 1/10W	J
	R9544	NRS144J-1R0X	MG R	1.0 Ω 1/4W	J
	R9546	NRSA02J-473X	MG R	47kΩ 1/10W	J
	R9547	NRSA02J-103X	MG R	10kΩ 1/10W	J
	R9548	NRSA02J-152X	MG R	1.5kΩ 1/10W	J
	R9549	NRSA02J-393X	MG R	39kΩ 1/10W	J
	R9551	NRSA02J-153X	MG R	15kΩ 1/10W	J
	R9552	NRSA02J-124X	MG R	120kΩ 1/10W	J
	R9553	NRSA02J-273X	MG R	27kΩ 1/10W	J
	R9554	NRSA02J-101X	MG R	100Ω 1/10W	J
	R9555	NRSA02J-124X	MG R	120kΩ 1/10W	J
	R9556	NRSA02J-333X	MG R	33kΩ 1/10W	J
	R9602-05	QRZ0205-R01	MP R	0.01 Ω 5W	K
CAPACITOR					
⚠	C9101	QFZ9036-104	MF CAP.	0.1μF AC250V	M
⚠	C9102	QCZ9078-222	C CAP.	2200pFAC250V	M
⚠	C9103	QCZ9078-222	C CAP.	2200pFAC250V	M
⚠	C9104	QCZ9078-472	C CAP.	4700pFAC250V	M
⚠	C9105	QFZ9075-155	MPP CAP.	1.5μFAC275V	M
⚠	C9106	QCZ9078-222	C CAP.	2200pFAC250V	M
⚠	C9107	QCZ9078-222	C CAP.	2200pFAC250V	M
	C9201	NDC21HJ-471X	C CAP.	470pF 50V	J
	C9202	NDC21HJ-680X	C CAP.	68pF 50V	J
	C9203	NCB21EK-154X	C CAP.	0.15μF 25V	K
	C9204	QEHR1VM-477Z	E CAP.	470μF 35V	M
	C9205	NCF21HZ-334X	C CAP.	0.33μF 50V	Z
	C9206	NCB21HK-331X	C CAP.	330pF 50V	K
	C9207-08	QEHR1HM-226Z	E CAP.	22μF 50V	M
	C9209	QEHR1HM-107Z	E CAP.	100μF 50V	M
	C9210	QEHR1HM-226Z	E CAP.	22μF 50V	M
⚠	C9211	QFZ0128-474	MPP CAP.	0.47μF 400V	±3%
⚠	C9212	QEZ0498-567	E CAP.	560μF 450V	M
	C9213	NDC21HJ-152X	C CAP.	1500pF 50V	J
	C9214	NDC21HJ-271X	C CAP.	270pF 50V	J
	C9215	NCB21HK-103X	C CAP.	0.01μF 50V	K
	C9216	NDC21HJ-390X	C CAP.	39pF 50V	J
	C9218	NDC21HJ-680X	C CAP.	68pF 50V	J
	C9220	NCB21EK-104X	C CAP.	0.1μF 25V	K
	C9301-02	NCF11EZ-105X	C CAP.	1μF 25V	Z
	C9303	QEHR1VM-227Z	E CAP.	220μF 35V	M
	C9304	NCB21EK-104X	C CAP.	0.1μF 25V	K
	C9305	NCS21EJ-472X	C CAP.	4200pF 25V	J
	C9306	NCB21HK-103X	C CAP.	0.01μF 50V	K
	C9307	NDC21HJ-101X	C CAP.	100pF 50V	J
	C9308	NDC21HJ-561X	C CAP.	560pF 50V	J
	C9309	QEHR1HM-106Z	E CAP.	10μF 50V	M
	C9311	NDC21HJ-471X	C CAP.	470pF 50V	J
	C9401-02	NCF11EZ-105X	C CAP.	1μF 25V	Z
	C9403	QEHR1HM-106Z	E CAP.	10μF 50V	M

⚠	Symbol No.	Part No.	Part Name	Description	
CAPACITOR					
⚠	C9404	QCZ9079-222	C CAP.	2200pFAC250V	M
	C9501	QEHR1CM-227Z	E CAP.	220μF 16V	M
	C9502	QEHR1HM-106Z	E CAP.	10μF 50V	M
	C9503	QEHR1HM-105Z	E CAP.	1μF 50V	M
	C9504	NCB21HK-102X	C CAP.	1000pF 50V	K
	C9505	QTNC1HM-105Z	E CAP.	1.0μF 50V	M
	C9506	QEHR1CM-107Z	E CAP.	100μF 16V	M
	C9507-08	NCB21EK-104X	C CAP.	0.1μF 25V	K
	C9509	QEHR1CM-227Z	E CAP.	220μF 16V	M
	C9510	NCB21HK-102X	C CAP.	1000pF 50V	K
	C9511	QCB32HK-561Z	C CAP.	560pF 500V	K
	C9512	QEHR1HM-226Z	E CAP.	22μF 50V	M
	C9513	QCB32HK-222Z	C CAP.	2200pF 500V	K
	C9514	NCB21HK-103X	C CAP.	0.01μF 50V	K
	C9515	NCB21HK-102X	C CAP.	1000pF 50V	K
	C9516	QFKB2EJ-334	MM CAP.	0.33μF 250V	J
	C9517	NCZ1024-102X	C CAP.	1000pF 250V	K
	C9518	NCB21HK-103X	C CAP.	0.01μF 50V	K
	C9519	NDC21HJ-121X	C CAP.	120pF 50V	J
	C9521	QCB32HK-222Z	C CAP.	2200pF 500V	K
	C9602	QEZ0440-476	E CAP.	47μF 160V	M
	C9603	QCB32HK-102Z	C CAP.	1000pF 500V	K
TRANSFORMER					
⚠	T9201	QQR1077-001	CHOKE COIL		
⚠	T9301	QQR0812-001	DRIVE TRANSF.		
⚠	T9401	QQS0059-001	SWITCH.TRANSF.		
COIL					
⚠	L9601	QQR1042-001	CHOKE COIL		
DIODE					
⚠	D9101	D15XB60	SI.DIODE		
	D9201	MA3270/H/-X	ZENER DIODE		
	D9202	D1FS6-X	SI.DIODE		
	D9203	D1FS4-X	SI.DIODE		
	D9204	RD18E/B3/-T2	ZENER DIODE		
	D9205	EU2A-T3	SI.DIODE		
	D9206-08	D1FS4-X	SI.DIODE		
	D9209	YG912S6	SI.DIODE		
	D9210	MA3051-X	ZENER DIODE		
	D9211	MA3110/M/-X	ZENER DIODE		
	D9212	MA3056/H/-X	ZENER DIODE		
	D9213	MA111-X	SI.DIODE		
	D9301	D1FS4-X	SI.DIODE		
	D9302	MA3120/M/-X	ZENER DIODE		
	D9303-06	MA111-X	SI.DIODE		
	D9307	MA3150/M/-X	ZENER DIODE		
	D9308	MA3270/H/-X	ZENER DIODE		
	D9309-11	MA111-X	SI.DIODE		
	D9401	D1FS4-X	SI.DIODE		
	D9402	PTZ27A-X	ZENER DIODE		
	D9403	D5L60	SI.DIODE		
	D9404	D1FS4-X	SI.DIODE		
	D9405	PTZ27A-X	ZENER DIODE		
	D9406	D5L60-F1	SI.DIODE		
	D9407	D1FS6-X	SI.DIODE		
	D9501	D1FL20U-X	SI.DIODE		
	D9502	MA111-X	SI.DIODE		
	D9503	SF0R1A42-T	THYRISTOR		
	D9504	MA3051/M/-X	ZENER DIODE		
	D9505	D1FS6-X	SI.DIODE		
	D9506	D5L60	SI.DIODE		
	D9507	MTZJ12C-T2	ZENER DIODE		
	D9508	MA111-X	SI.DIODE		
	D9509	MA3180/M/-X	ZENER DIODE		
	D9510	MA3150/M/-X	ZENER DIODE		
	D9511	MA111-X	SI.DIODE		
	D9512	MA3082/M/-X	ZENER DIODE		
	D9513	MTZJ12C-T2	ZENER DIODE		
	D9514	MA3062/M/-X	ZENER DIODE		
	D9515	MA3056/H/-X	ZENER DIODE		
	D9516-17	MA111-X	SI.DIODE		

⚠	Symbol No.	Part No.	Part Name	Description
	DIODE			
	D9518-19	1SS376-X	SI.DIODE	
	D9520	MA111-X	SI.DIODE	
	D9521-22	MA3180/M/-X	ZENER DIODE	
	D9523	MA111-X	SI.DIODE	
	D9601	FML-33S-F1	SI.DIODE	
	D9602-03	D20LC20U	SI.DIODE	
	TRANSISTOR			
	Q9201	2SC4668-W	SI.TRANSISTOR	
	Q9203	2SA1795-W	SI.TRANSISTOR	
	Q9204	2SK2196	F.E.T.	
	Q9205	2SA1795-W	SI.TRANSISTOR	
	Q9206	2SK2196	F.E.T.	
	Q9207	2SA1795-W	SI.TRANSISTOR	
	Q9208	2SK2196	F.E.T.	
	Q9209	2SC4668-W	SI.TRANSISTOR	
	Q9210	2SA1795-W	SI.TRANSISTOR	
	Q9301	DTC143XKA-X	DIGI.TRANSISTOR	
	Q9302-03	DTC114EKA-X	DIGI.TRANSISTOR	
	Q9304	2SA1162/YG/-X	SI.TRANSISTOR	
	Q9305	2SC4668-W	SI.TRANSISTOR	
	Q9306	2SA1795-W	SI.TRANSISTOR	
	Q9309	2SC3751/KLM/	SI.TRANSISTOR	
	Q9310	2SK1228-X	F.E.T.	
	Q9311-12	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q9401-02	2SK1017-01	F.E.T.	
	Q9501	DTC123YKA-X	DIGI.TRANSISTOR	
	Q9502	DTC124EKA-X	DIGI.TRANSISTOR	
	Q9503-04	2SA1037AK/QR/-X	SI.TRANSISTOR	
	Q9505	2SD2114K/V/-X	SI.TRANSISTOR	
	Q9506	DTC114EKA-X	DIGI.TRANSISTOR	
	Q9507	DTC143XKA-X	DIGI.TRANSISTOR	
	Q9508	2SC4061K/NP/-X	SI.TRANSISTOR	
	Q9509	2SC2412K/QR/-X	SI.TRANSISTOR	
	Q9510	IRF9630	F.E.T.	
	Q9511	DTC143XKA-X	DIGI.TRANSISTOR	
	Q9512	2SC2412K/QR/-X	SI.TRANSISTOR	
	IC			
	IC9201	FA5332M-X	I.C.(MONO-ANA)	
	IC9301	UC3843BD1-X	I.C.(MONO-ANA)	
⚠	IC9302	TLP721F(GR)	I.C.(PH.COUPLER)	
⚠	IC9303	TLP721F(GR)	I.C.(PH.COUPLER)	
	IC9304	TL072CD-X	I.C.(MONO-ANA)	
	IC9501	UPC358G-W	I.C.(MONO-ANA)	
	IC9502	NJM431U-XE	I.C.(MONO-ANA)	
	IC9503	UPC358G-W	I.C.(MONO-ANA)	
	IC9504	NJM431U-XE	I.C.(MONO-ANA)	
	OTHERS			
		QQR0867-001	FERRITE CORE	(x2)
	CN9010	QGA7901C1-02	VH POST HEADER	
	CN90PI	QNZ0127-001	A/V TERMINAL	
	CN90PO	QNZ0127-001	A/V TERMINAL	
	CN90VH	CE41507-001P	LV CONNECTOR	
⚠	LF9101	QQR0810-001	LINE FILTER	

IGNITER P.W.BOARD ASS'Y (SXA-9303A)

Refer to PARTS LIST in page 41 for this P.W. board.

MAIN LINE FILTER P.W. BOARD ASS'Y(SXG-9506A)

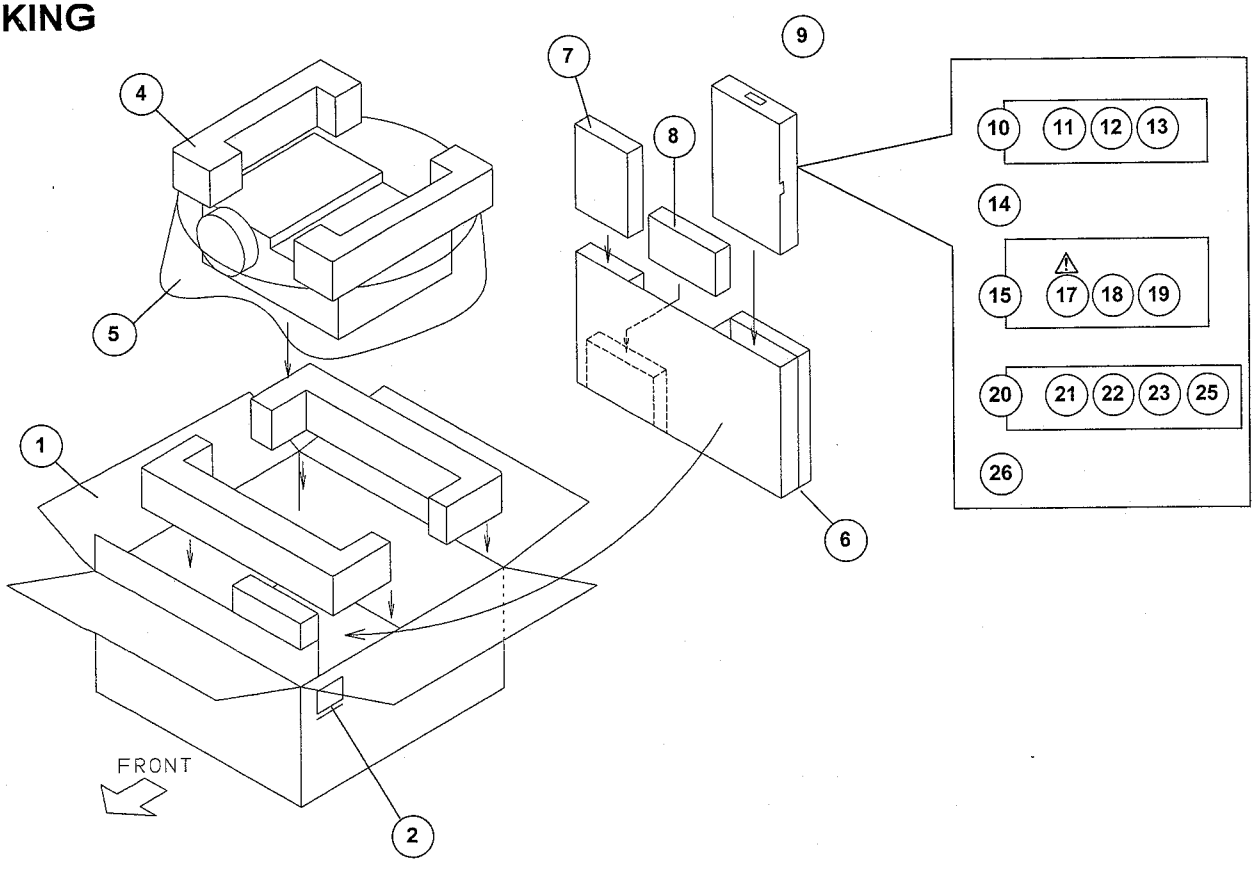
[DLA-M2000LE]

⚠	Symbol No.	Part No.	Part Name	Description	
	RESISTOR				
⚠	R9901	QRZ0111-474	C R	470kΩ 1/2W	K
⚠	R9902	QRZ0057-825	C R	8.2MΩ 1W	J
⚠	R9903	QRZ0121-4R7	UNF.WW.R	4.7 Ω 5W	J
⚠	R9910	QRZ9050-1R2	F R	1.2 Ω 5W	J
	R9911-12	NRSA02J-103X	MG R	10kΩ 1/10W	J
	CAPACITOR				
⚠	C9901	QFZ9075-225	MPP CAP.	2.2μFAC275V	M
⚠	C9903	QFZ9036-104	MF CAP.	0.1μF AC250V	M
⚠	C9904	QCZ9078-222	C CAP.	2200pFAC250V	M
⚠	C9905	QCZ9078-222	C CAP.	2200pFAC250V	M
⚠	C9906	QCZ9079-472	C CAP.	4700pFAC250V	M
⚠	C9907	QFZ9036-104	MF CAP.	0.1μF AC250V	M
⚠	C9909	QFZ9036-104	MF CAP.	0.1μF AC250V	M
⚠	C9910	QFZ9075-105	MPP CAP.	1.0μFAC275V	M
	C9911-12	QEHR1VM-476Z	E CAP.	47μF 35V	M
	DIODE				
	D9910	MA111-X	SI.DIODE		
	TRANSISTOR				
	Q9910	2SC2412K/QR/-X	SI.TRANSISTOR		
	OTHERS				
⚠	LF9901	QQR0810-001	LINE FILTER		
⚠	LF9902	QQR0810-001	LINE FILTER		
⚠	RY9910	QSK0055-001	RELAY		
⚠	VA9901	ERZV10V621CS	VARISTOR		

REMOTE CONTROL UNIT PART LIST (RM-M2000G)

⚠ Ref No.	Part No.	Part Name	Description
	103RRC-173-03R	BATTETY COVER	

PACKING

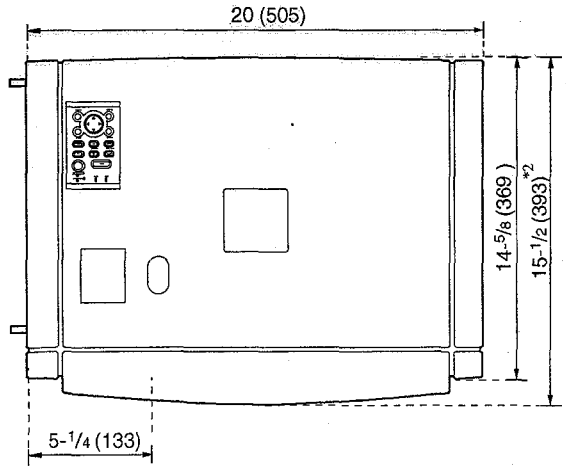


PACKING PARTS LIST

⚠ Ref No.	Part No.	Part Name	Description
1	LC20466-012A	PACKING CASE	[DLA-M2000LU]
1	LC20466-013A	PACKING CASE	[DLA-M2000LE]
2	CM47385-00A	POS/SERIAL LABEL	
4	LC20795-001A	CUSHION ASSY	4pcs in 1set
5	CP30974-004	POLY BAG	
6	LC31580-001A	SLEEVE	
7	LC31649-001A	SPACER	
8	LC31649-002A	SPACER	
9	LC30702-001A	ACCESSORY BOX	
10	QPA01703005	POLY BAG	
11	QAM0303-001	A/V CABLE	
12	QAM0081-001	CABLE	
13	QAM0192-001	ADAPTOR PLUG	
14	QAM0104-002	PC CABLE	
15	QPA02503505P	POLY BAG	
⚠ 17	LCT0940-001A	INST.BOOK	[DLA-M2000LU]
⚠ 17	LCT0941-001A	INST BOOK	[DLA-M2000LE]
18	QPA01503005	POLY BAG	[DLA-M2000LU ONLY]
19	BT-51019-2	WARRANTY CARD	[DLA-M2000LU ONLY]
20	QPA01503005	POLY BAG	
21	CEAA001-001	ADAPTOR PLUG	
22	LC41071-001A	BALL HEX DRIVER	
⚠ 23	QMPE100-250-K	POWER CORD	[DLA-M2000LU]
⚠ 23	QMPL050-250-K	POWER CORD	[DLA-M2000LE]
⚠ 23	QMPP070-250-K	POWER CORD	[DLA-M2000LE]
26	RM-M2000G	REMOCON UNIT	

OUTSIDE DIMENSIONS

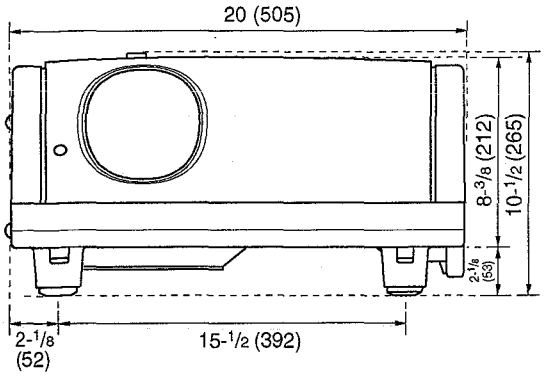
■ Top



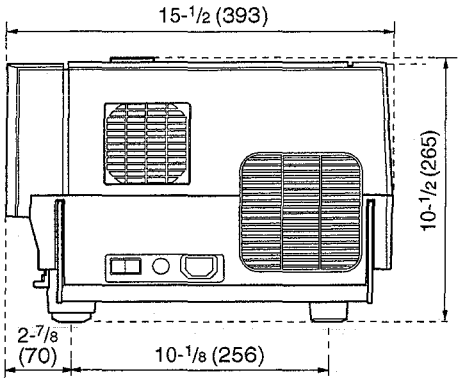
Unit: inch (mm)

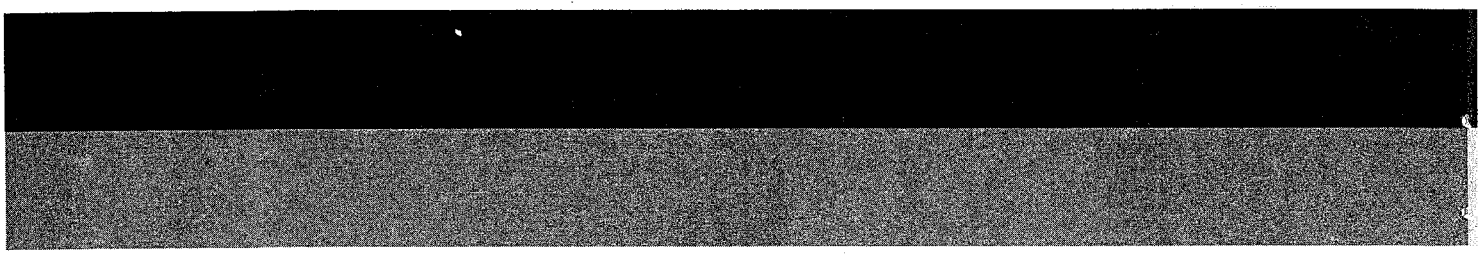
*1: Protrusion excluded
*2: Lens excluded

■ Front



■ Side





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DLA-M2000LE #3

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DLA-M2000LU/DLA-M2000LE STANDARD CIRCUIT DIAGRAM

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■ USING PWB LIST

PWB's name	DLA-M2000LU	DLA-M2000LE	REMARKS
ANALOG MODULE PWB	SXG-1101A	←	*NOT LISTED
DPC MODULE PWB	SXG-1201A	←	↑
DD MODULE PWB	SXG-1301A	←	↑
B DRIVE MODULE PWB	SXG-3301A	←	↑
RG DRIVE MODULE PWB	SXG-3401A	←	↑
MAIN POWER PWB	SXG-9003A	←	LISTED ON Page 2-9
LAMP POWER PWB	SXA-9107A	SXA-9108A	LISTED ON Page 2-11
IGNITER PWB	SXA-9303A	←	*NOT LISTED
MAIN LINE FILTER PWB	SXG-9505A	SXG-9506A	LISTED ON Page 2-11
CONTROL & 3.3V MODULE PWB	SXG-0P001A	←	NOT LISTED

NOTE ON USING CIRCUIT DIAGRAMS

1. SAFETY

The components identified by the ⚠symbol and shading are critical for safety. For continued safety, replace safety critical components only with manufactures recommended parts.

2. SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1) Input signal : Color bar signal (VGA : 640 × 480)
(2) Setting positions of each knob / button and variable resistor : Original setting position when shipped
(3) Internal resistance of tester : DC 20kΩ / V
(4) Oscilloscope sweeping time : H ⇒ 20μs / div
: V ⇒ 5ms / div
: Others ⇒ Sweeping time is specified
(5) voltage values : All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustment, use them as reference values.

3. INDICATION OF PARTS SYMBOL [EXAMPLE]

●In the PW board : R1209 → R209

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4. INDICATIONS ON THE CIRCUIT DIAGRAM

(1) Resistors

●Resistance value

No unit	: [Ω]
K	: [kΩ]
M	: [MΩ]

●Rated allowable power

No indication	: 1/6 [W]
Others	: As specified

●Type

No indication	: Carbon resistor
OMR	: Oxide metal film resistor
MFR	: Metal film resistor
MPR	: Metal plate resistor
UNFR	: Uninflammable resistor
FR	: Fusible resistor

* Composition resistor 1/2[W] is specified as 1/2S or Comp.

(2) Capacitors

●Capacitance value

1 or higher	: [pF]
less than 1	: [μF]

●Withstand voltage

No indication	: DC50 [V]
Others	: DC withstand voltage [V]
AC indicated	: AC withstand voltage [V]

※Electrolytic Capacitors [Example]

47/50 : Capacitance value[μF] / withstand voltage[V]

●Type

No indication	: Ceramic capacitor
MY	: Mylar capacitor
MM	: Metalized Mylar capacitor
PP	: Polypropylene capacitor
MPP	: Metalized polypropylene capacitor
MF	: Metalized film capacitor
TF	: Tin film capacitor
BP	: Bipolar electrolytic capacitor
TAN	: Tantalum capacitor

(3) Coils

No unit	: [μH]
Others	: As specified

(4) Power Supply

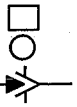
: B1
: B2
: 5V

* Respective voltage values are indicated

(5) Test Point

: Test point
: Only test point display

(6) Connecting Method



: Connector
: Wrapping or soldering
: Receptacle (On the PWB)

: Receptacle (On the wire)

(7) Ground Symbol

⊥ : LIVE side ground
⏚ : ISOLATED (NEUTRAL) side ground [analog circuit]
⏚ : EARTH ground
⏚ : ISOLATED (NEUTRAL) side ground [digital circuit]

5. NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND and the ISOLATED (NEUTRAL) : (⏚) side GND. Therefore, care must be taken for the following points.

(1) Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED (NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2) Do not short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or never measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED (NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

■ SEMICONDUCTOR SHAPES

TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
E C B	E C B	B C E (G)(D)(S)	E C B	E C B	CHIP TR

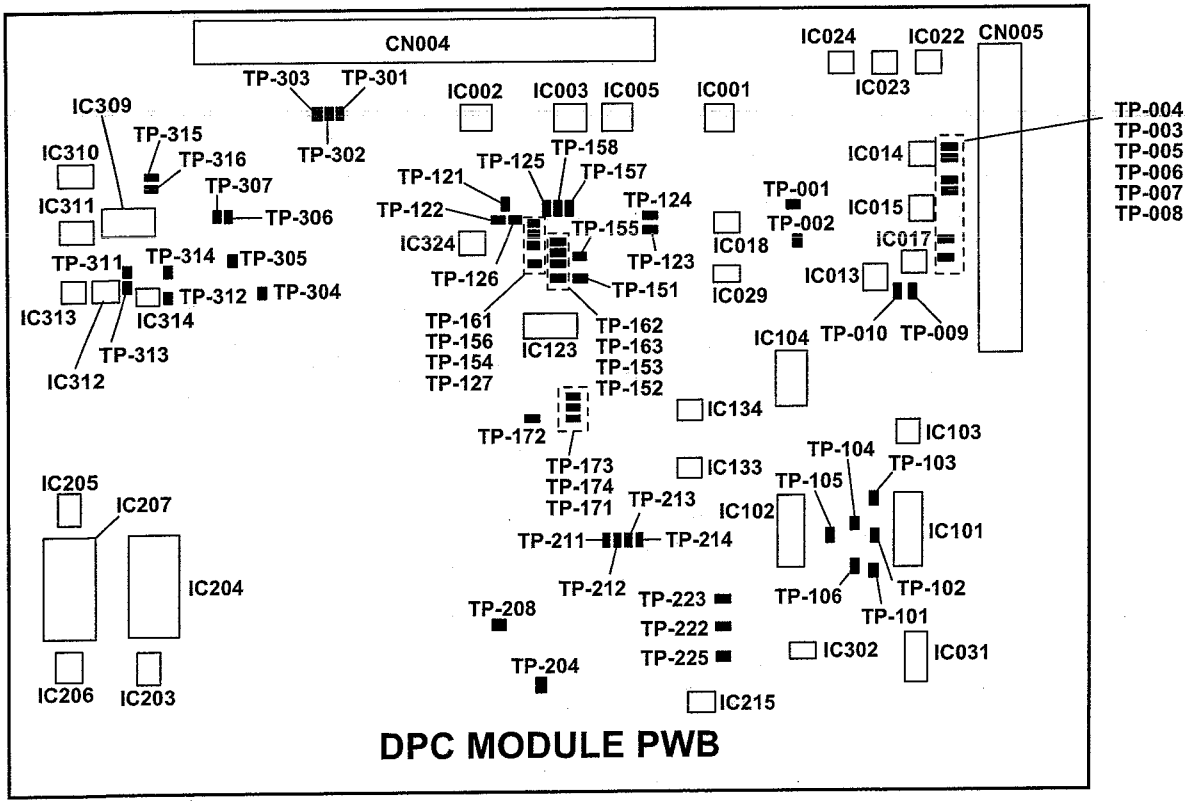
IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW
OUT E IN	IN E OUT	1 → N	1 → N	1 N

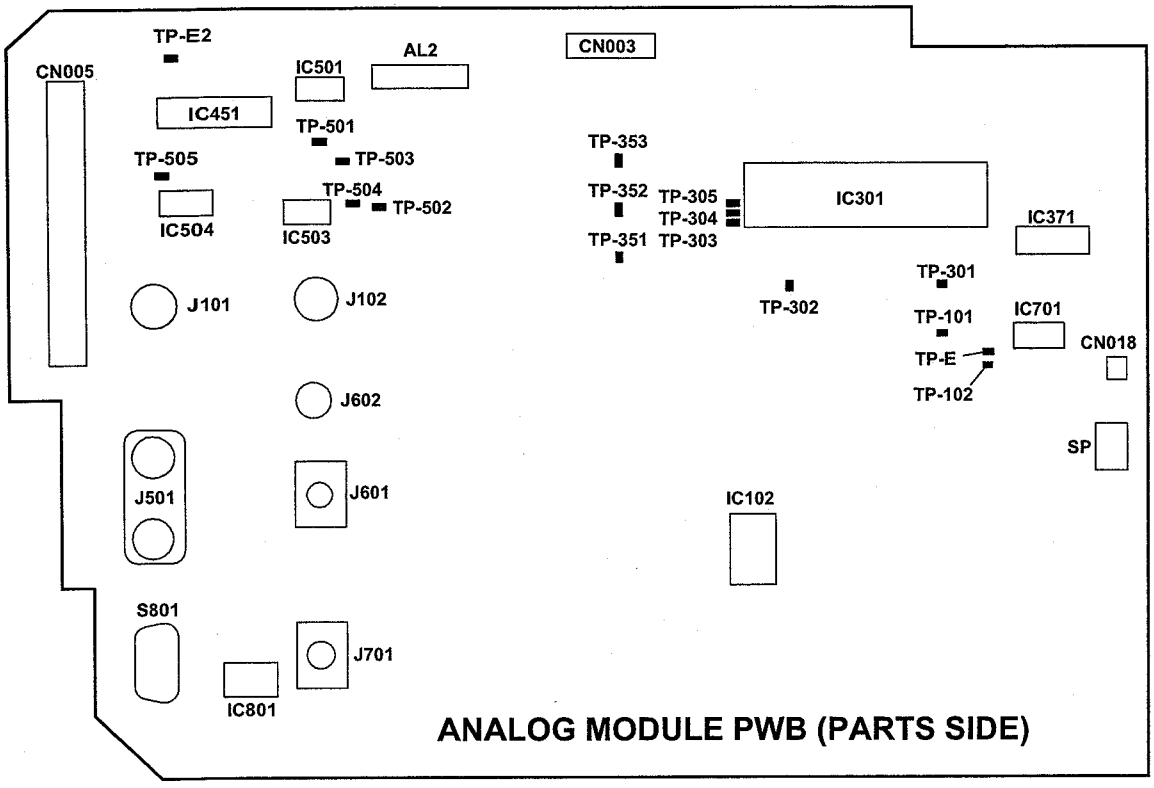
CHIP IC

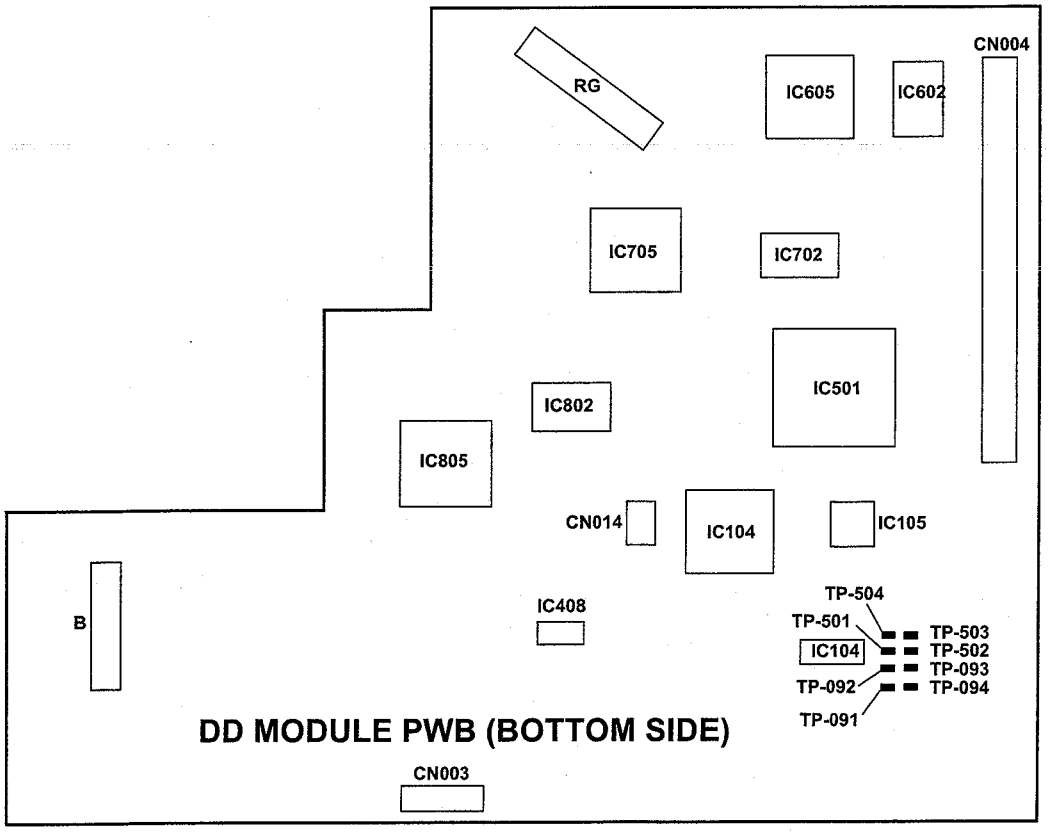
TOP VIEW		
N N N 1 N	1 N	

■ TEST POINTS LOCATION (1/2)



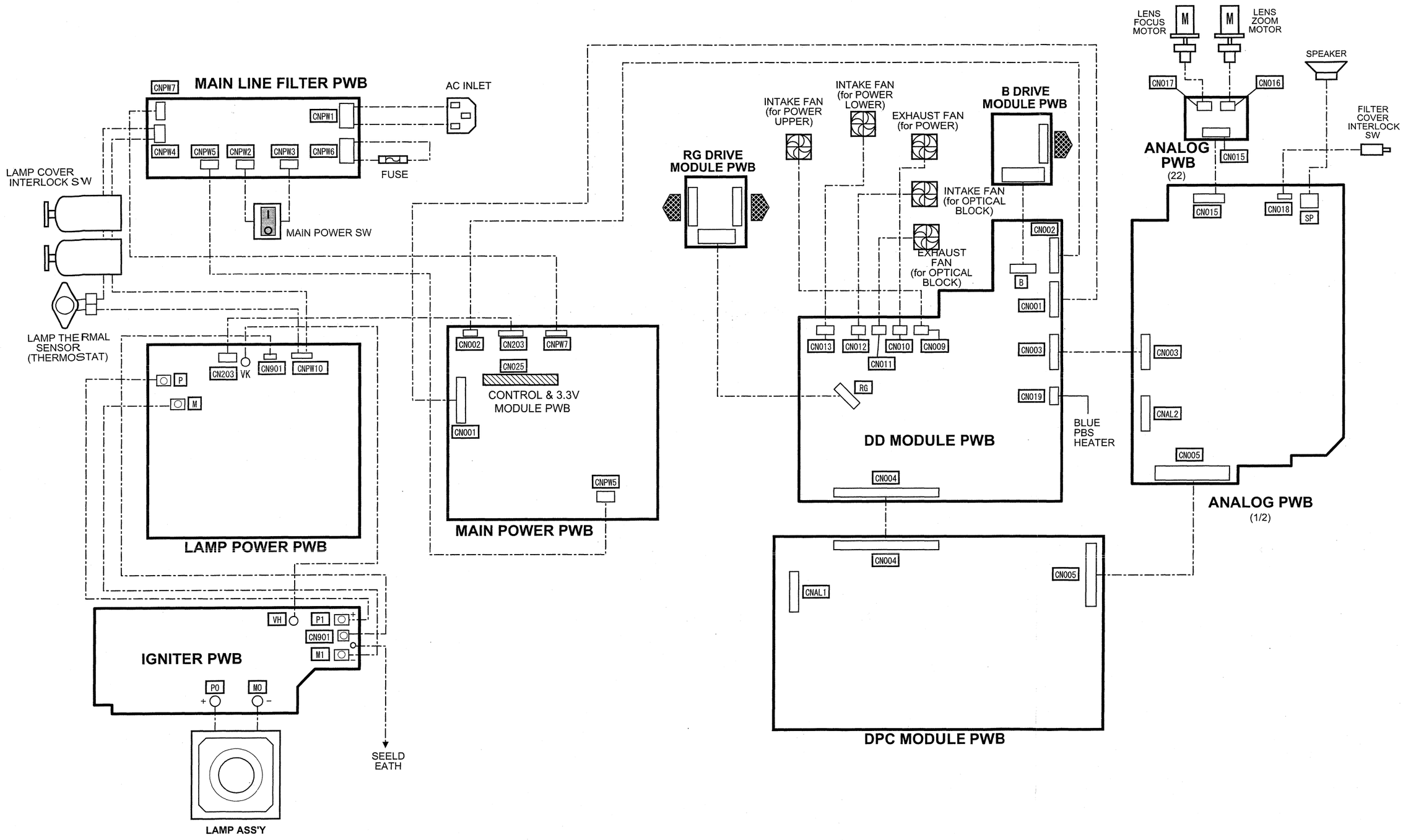
■ TEST POINTS LOCATION (2/2)





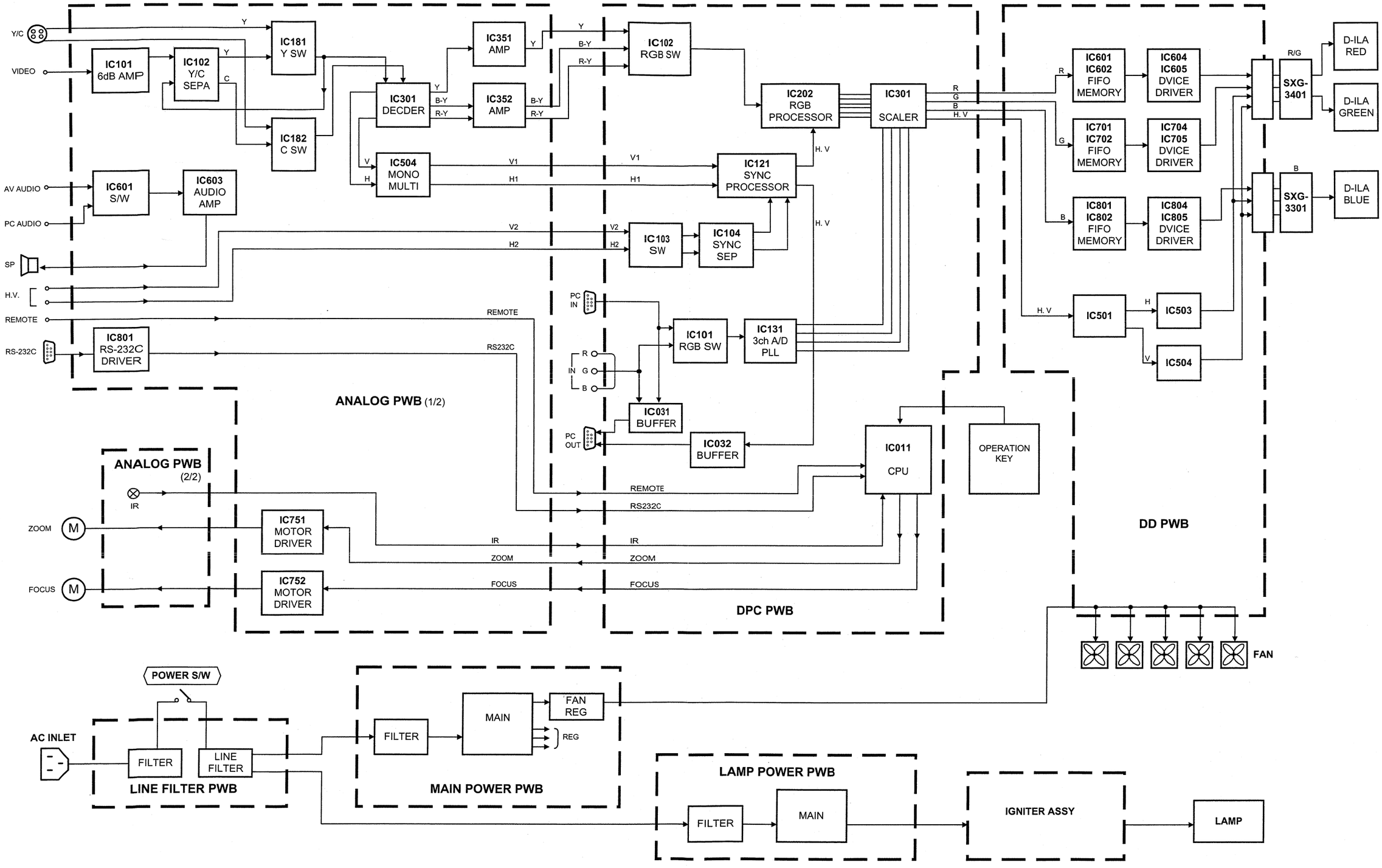
DLA-M2000LU
DLA-M2000LE

■ WIRING DIAGRAM



DLA-M2000LU
DLA-M2000LE

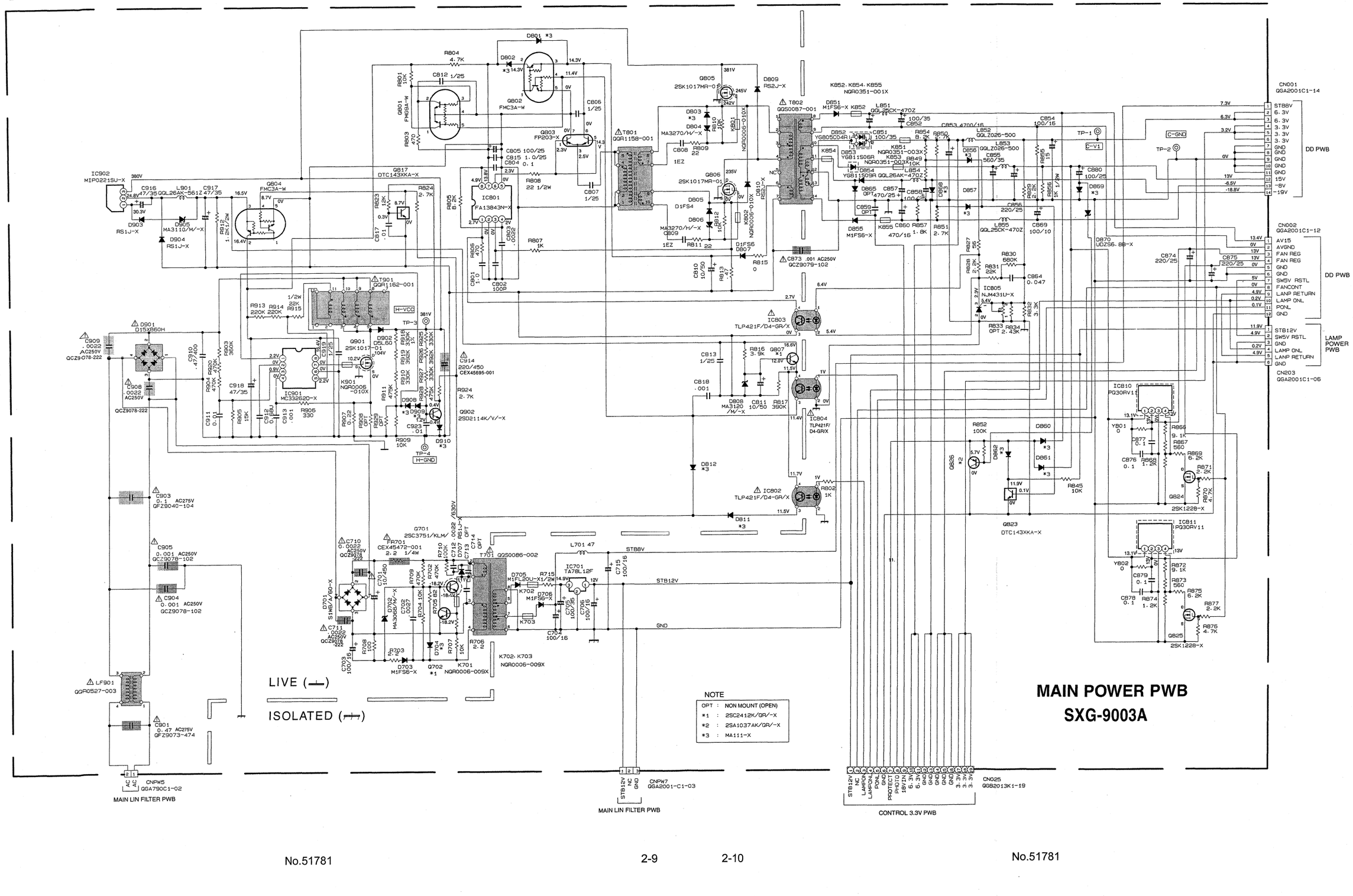
■ BLOCK DIAGRAM



DLA-M2000LU
DLA-M2000LE

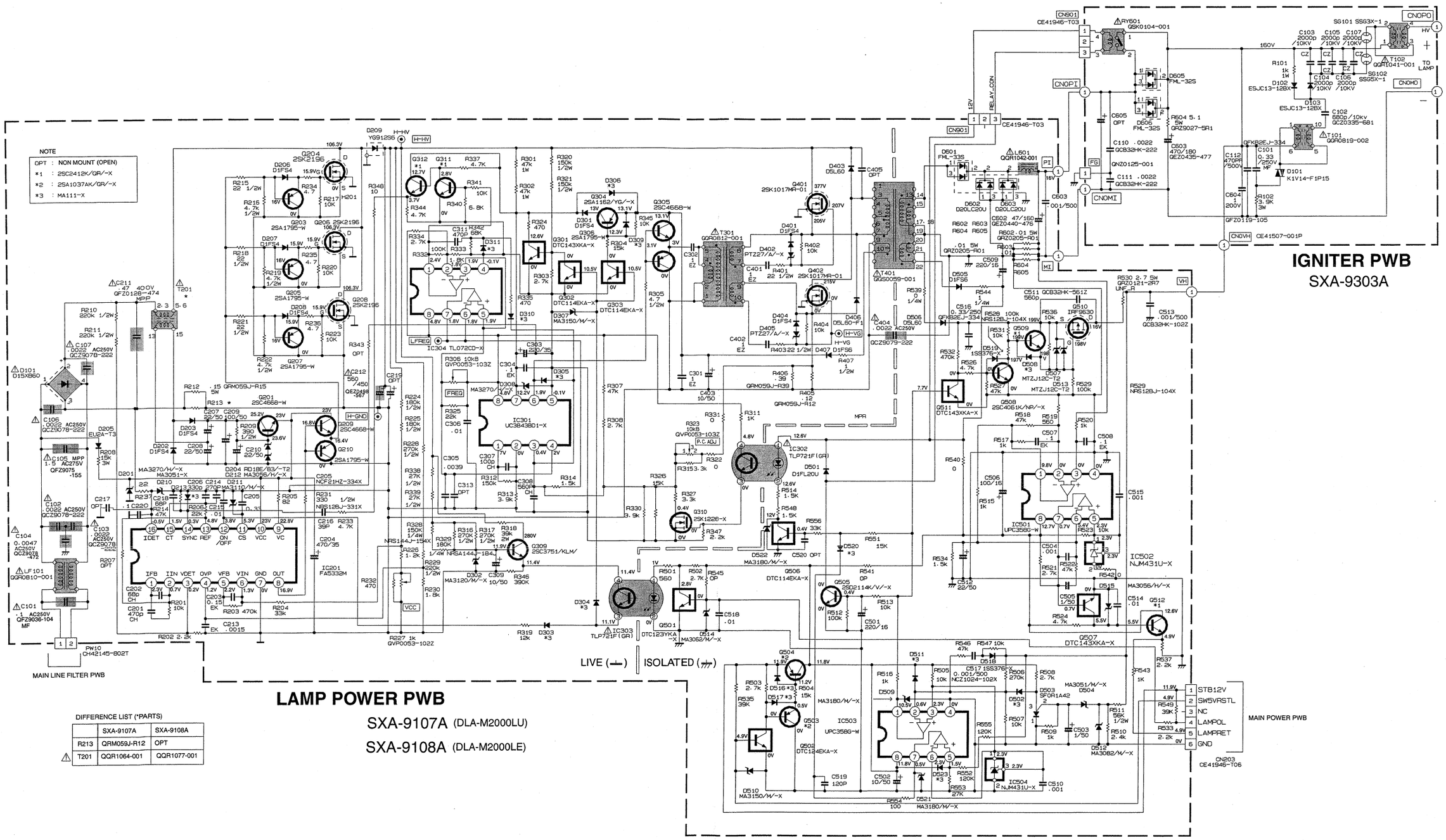
CIRCUIT DIAGRAMS & PWB PATTERNS

[MAIN POWER PWB CIRCUIT DIAGRAM]



DLA-M2000LU
DLA-M2000LE

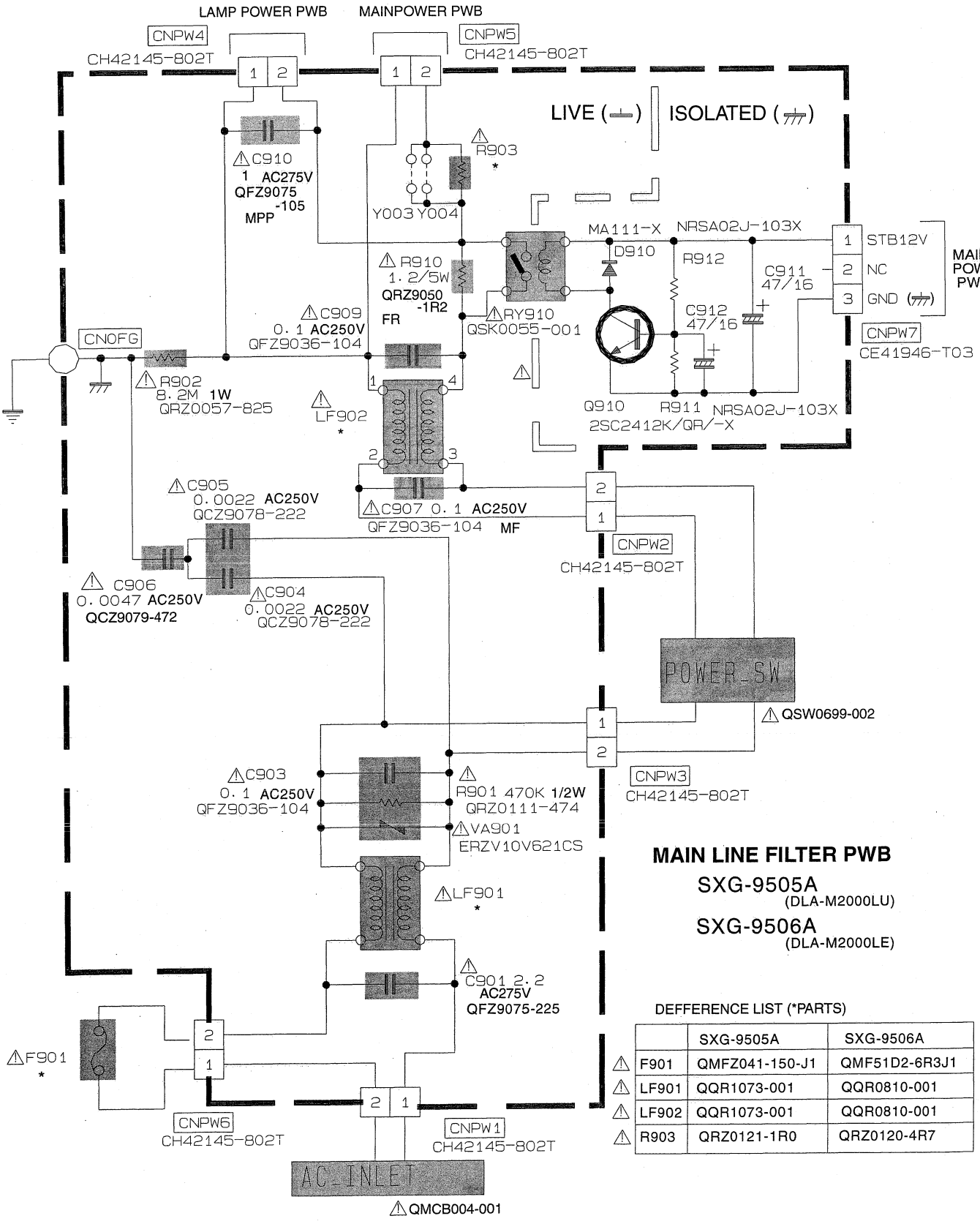
[LAMP POWER PWB CIRCUIT DIAGRAM]



DIFFERENCE LIST (*PARTS)

	SXA-9107A	SXA-9108A
R213	QRM059J-R12	OPT
⚠ T201	QQR1064-001	QQR1077-001

[MAIN LINE FILTER PWB CIRCUIT DIAGRAM]



MAIN LINE FILTER PWB

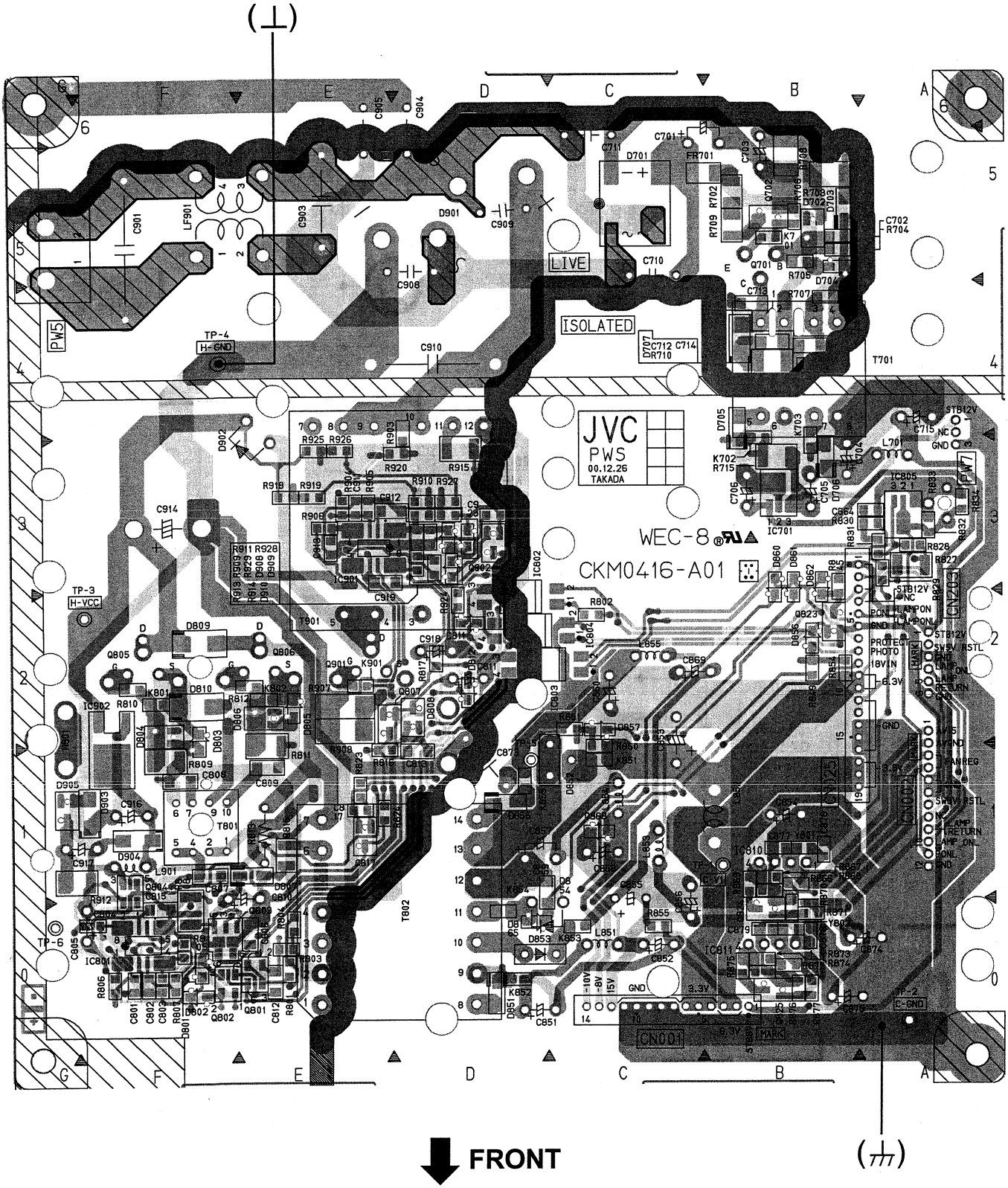
SXG-9505A
(DLA-M2000LU)

SXG-9506A
(DLA-M2000LE)

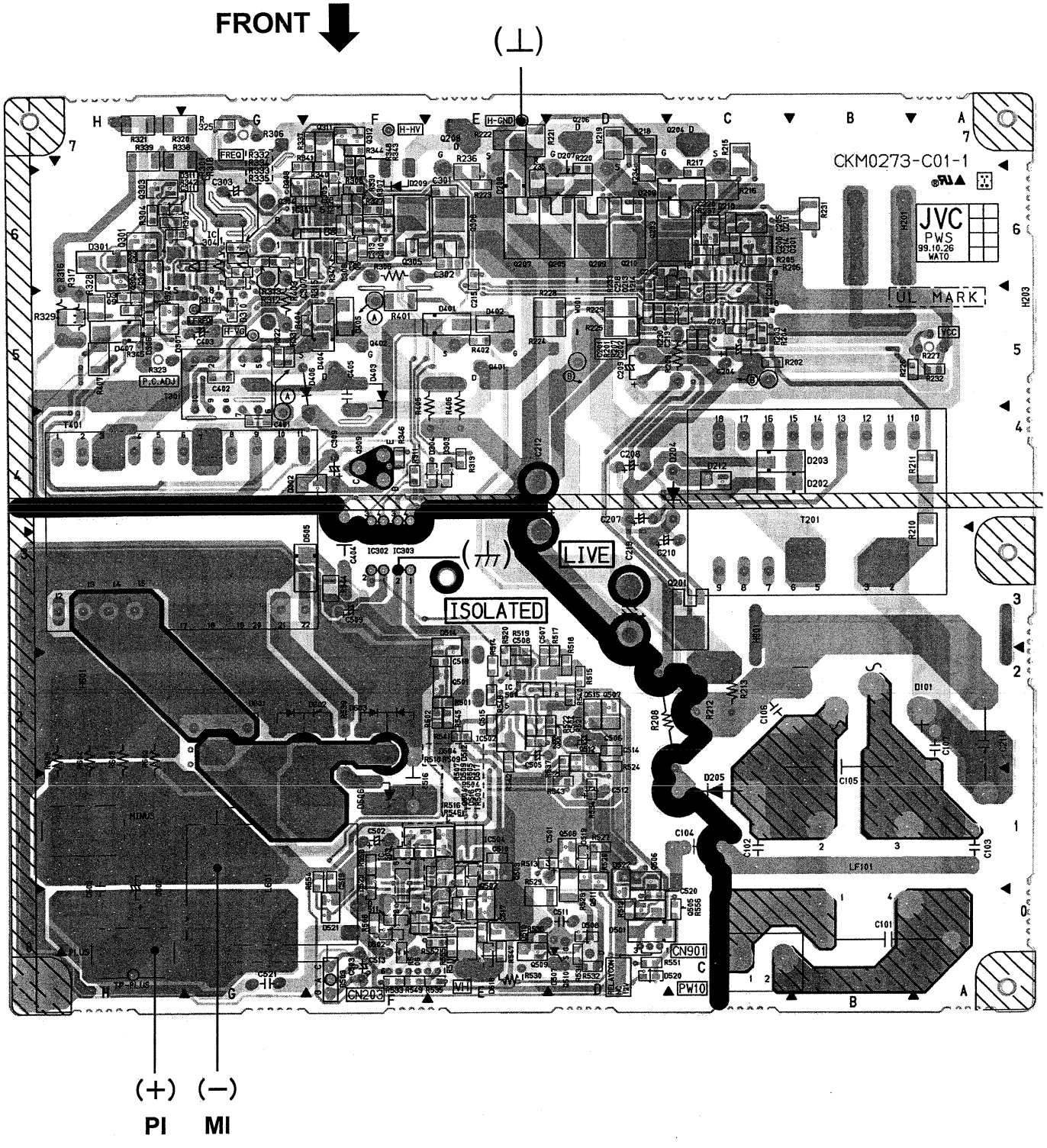
DEFFERENCE LIST (*PARTS)

		SXG-9505A	SXG-9506A
⚠	F901	QMFZ041-150-J1	QMF51D2-6R3J1
⚠	LF901	QQR1073-001	QQR0810-001
⚠	LF902	QQR1073-001	QQR0810-001
⚠	R903	QRZ0121-1R0	QRZ0120-4R7

[POWER PWB PATTERN]

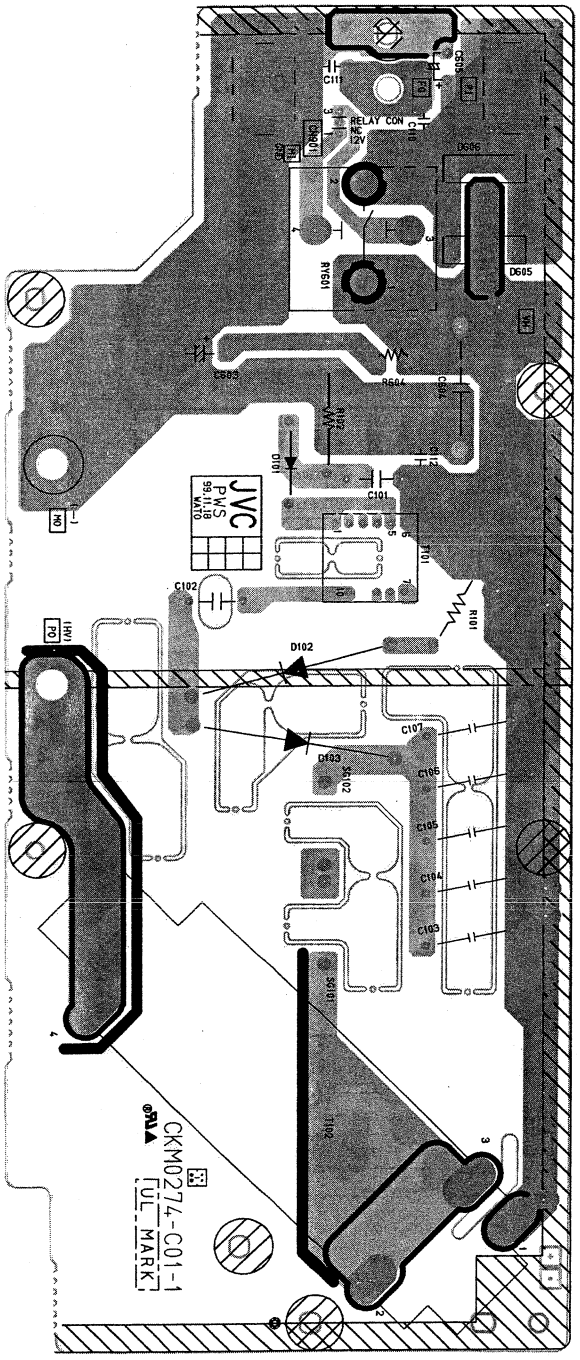


[LAMP POWER PWB PATTERN]



[IGNITER PWB PATTERN]

FRONT



[MAIN LINE FILTER PWB PATTERN]

FRONT